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AMERICAN
MEDICAL MONTHLY.

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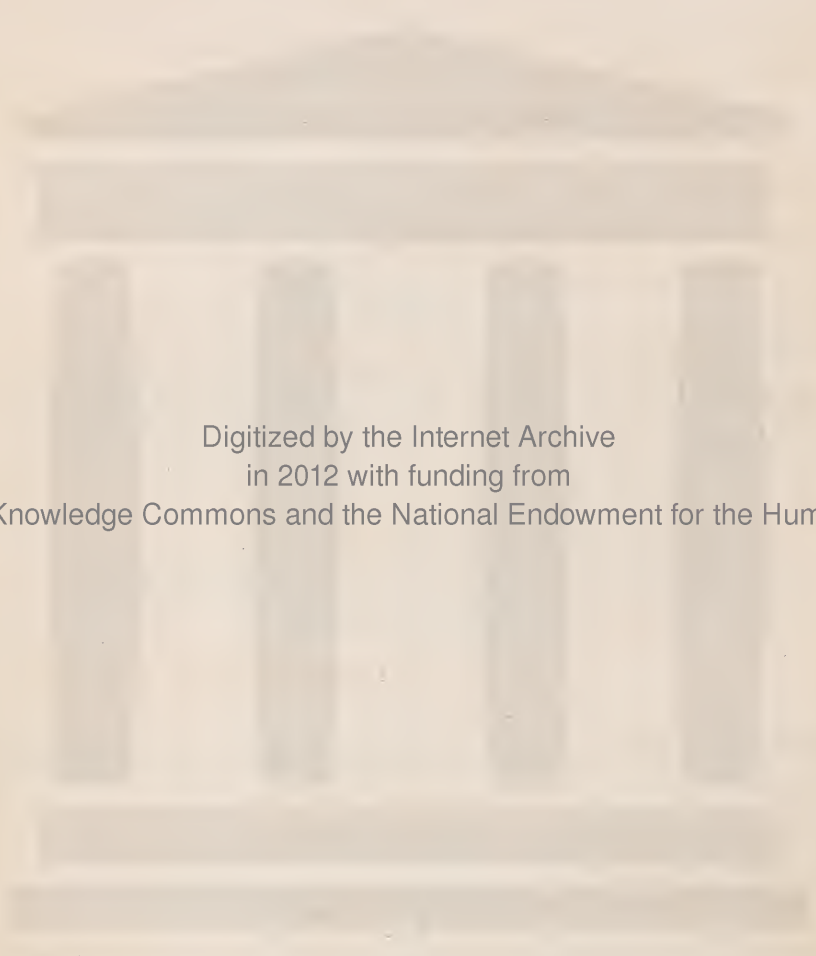
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INDEX TO VOL. III.

OF

THE AMERICAN MEDICAL MONTHLY.

Abortion caused by Fissures of the Os Uteri,.....	419
Abscess, Acute Ovarian, in which the Tumor, after pointing in the left iliac region, moved completely over to the right. By J. M. Green, M.D.,.....	161
Abscess, Pelvic (two cases),.....	230
Abuses in the Retail Drug Trade,.....	70
Academy, a nut for the,.....	318
Acne,	68
Acute Phlebitis simulating Yellow Fever,.....	69
Amaurosis, Glück's Lecture on,.....	26
Amblyopia, Glück's Lecture on,.....	26
American Medical Association,.....	319, 454
American Medical Association, Transactions of,.....	127
Analyses of Bone and of Congress Water,.....	369
Aneurism of the Aorta,.....	228
Aneurism, Popliteal,.....	139
Annual Report of the Blackwell's Island Hospital, Notice of, ..	383
Aorta, Dilatation of ascending,.....	290
Aphorism of Hippocrates,.....	152
Apoplectic Effusion after Delirium Tremens,.....	56
Arrest of Development in one Fœtus (twins),.....	76
Atrophied Infants,.....	227
Barker's Clinique for Diseases of Women,.....	241
Bennett (H. N.) and Kyburz on Tuberculous Peritonitis in Adults,	346
Bigelow's Nature in Disease, Notice of,.....	55
Bilateral Operation in the Female for Calculus,.....	66
Blackwell's Island Hospital,.....	478
Blackwell's Island Hospital, Notice of Annual Report,.....	383
Bladder, Chronic Disease of (two cases),.....	131
Blancard's Pills of Iodide of Iron,.....	479
Bone, Analysis of Frontal,.....	369

Bougie of Gutta Percha broken in the Urethra,.....	294
Brainard's Prize Essay,.....	318
Brain, Tumors developed in the,.....	448
British Military Medicine and Surgery in the Crimea, Peaslee on	321
Burggraave (Prof.) on Hysterical Hydrophobia,.....	468
Calcification on the Surface of the Pericardium,.....	128
Calculus in the Female, Bilateral Operation for,.....	66
California, Insanity in,.....	469
Cancer of the Cerebellum, Case of,.....	55
Cancer of the Œsophagus,.....	56
Cancer of the Pancreas,.....	139
Cancer, Use of the Microscope in the Diagnosis of,.....	140
Carnochan's case of Gunshot Wound of the Heart,.....	272
Cataract in the Dog,.....	135
Chemical Action of Galvanic Electricity on Organic Tissue,...	446
Chemistry, Review of Robin and Verdeil's Anatomical and Physiological,.....	193
Chloroform in Surgery, Erichsen on,.....	143
Cholera Asiatica, Reflections on the Nature and Curability of,.	359
Cholera, Discussion on,.....	57, 61
Cholera Epidemic, Dr. A. G. Lawton on,.....	174
Cholera in Brooklyn, Review of Hutchison on,.....	280
Cholera, Pathology and Treatment of,.....	81
Chopart's Operation,.....	77
Choroiditis,.....	406
Chronic Disease of the Bladder,.....	131
Chronic Papular Eruptions,.....	67
Cinchonia, Sulphate of,.....	460
Clinical Lectures on some of the Principal Diseases of the Eye. By I. Glück, M.D.,.....	26, 401
Collodion in Orchitis,.....	68
Commencements (Medical) in New York,.....	311
Complimentary,	399
Conant (D. S.) on Cholera,.....	61
Conant (D. S.) on the Pathology and Treatment of Cholera,..	81
Congress Water, Analysis of,.....	369
Correction,	398
Cox's (H. G.) Valedictory Address,.....	255
Creosote in Intermittent Fever,.....	68
Crimea, Wretched Sanitary Condition of the English Army in the, Peaslee on,.....	111

Delirium Tremens, followed by Sanguineous Effusion within the Skull,	56
Dilatation of Ascending Aorta,	290
Discussion on Cholera,	57
Diseases and Injuries of Seamen, &c., Review of,	125
Drug Trade, Startling Abuses in the,	70
Du Berceau's (Arthur) Analyses of Bone and of Congress Water,	369
Ear, Vegetable Parasite in the,	223, 228
Emigrant Passengers' Relief,	238
Encephaloid Disease of the Liver,	128
Enchondroma,	226
Epidemic Cholera, Dr. A. G. Lawton on,	174
Erichsen on Chloroform in Surgery,	143
Eulenburg on Rheumatic Inflammation of the Heart,	298
Exostosis,	451
Explanatory,	480
Eye, Lectures on some of the Principal Diseases of the. By I. Glück, M.D.,	26, 401
Fear, Influence of, in Producing Functional Derangements,	146
Fibrous Polypus of the Nose,	129
Filaria Gracilis,	134
Fissures of the Nipple during Lactation,	157
Fissures of the Os Uteri causing Abortion,	419
Fistula Lachrymalis,	320
Flint's Introductory Lecture, Notice of,	52
Fœtus, Arrest of Development in one of Twins,	76
Food, Horse-Flesh as,	400
Functional Derangements, Influence of Fear in Producing,	146
Gambirini on Ulcerations upon the Frenum Linguae in Hooping Cough,	395
Gangrene, Case of,	135
Gangrene of the Lung, Discussion on,	136
Gardner (A. K.) on Uterine Hæmorrhage and Fissures of the Os Uteri,	419
Gibbs (O. C.) on Water Dressing for Wounds,	277
Glaucoma,	406
Glück's Clinical Lectures on some of the Principal Diseases of the Eye,	26, 401
Green and Congdon's Analytical Class-Book of Botany. Notice of,	289

Green (Horace) on the Employment of Injections into the Bronchial Tubes and into Tubercular Cavities of the Lungs, . . .	5
Green's (Horace) Reply to the Examiner,	376
Green's (Horace) Selections from Favorite Prescriptions of Living American Practitioners,	169, 251
Green's (J. M.) Case of Ovarian Abscess,	161
Gunshot Wound of the Heart,	272
Gutta Percha,	67
Gutta Percha Bougie broken in the Urethra,	294
Hæmorrhage, Uterine, Gardner on,	419
Harris' Dictionary of Medical Terminology, Notice of,	287
Hassall's Microscopic Anatomy, Review of,	48
Health Office,	158
Heart, Disease of the	226
Heart, Gunshot Wound of the	272
Heart, Malformation of the	224
Heart, On the Tic-tac felt by the Hand, as a means of Diagnosis in Disease of the	41
Heart, Rheumatic Inflammation of the	298
Hernia, Internal Strangulated, Case of	134
Hippocrates, Aphorism of	152
Hooping Cough, Ulcerations of the Frenum Linguae in	395
Horseflesh as Food,	400
Hutchison on Cholera in Brooklyn, Review of	280
Hutchison's (J. C.) Review of his Reviewer,	371
Hysterical Hydrophobia,	468
Indians, Medical Practice among	315
Inflammation and Ulceration of the Cervix Uteri,	385
Inflammation (Rheumatic) of the Heart,	298
Influence of Fear in producing Functional Derangements,	146
Influence of the Will on the Activity of the Iris,	404
Injections into the Bronchial Tubes and into Tubercular Cavities. By Horace Green, M.D., &c.,	5
Injustice of Blanks,	78
Insanity in California,	469
Internal Strangulated Hernia, Case of	134
Intussusception,	227
Iron, Blancard's Pills of Iodide of	479
Items,	160, 239, 319, 399
Kirkbride on Hospitals for the Insane, Notice of	286
Lactation, Fissures of the Nipple during	157

La Roche (R.) on Pneumonia, &c., Review of.....	188
Lawton (A. G.) on Epidemic Cholera,.....	174
Lectures on some of the Principal Diseases of the Eye. By Isidor Glück, M.D.....	26, 401
Leeches,	319
Life and Writings of Paracelsus. By Prof. Albert Smith,....	96
Lung, Gangrene of the	136
Lungs, On Injections into the Bronchial Tubes and Tubercular Cavities of the. By Horace Green, M.D.	5
Lying-In Asylum, Semi-Annual Report of	166
Malformation of the Heart,.....	224
Malpractice, Suit for.....	155
Medical Commencements in New York,.....	311
Medical Department of Harvard University,	320
Medical Practice among the Indians,.....	315
Medical Profession in Burmah,.....	320
Medical Society of the State of New York,.....	232
Melville's (Henry) Compilation of Reflections on the Nature and Curability of Cholera Asiatica,.....	359
Melville on the Tic-tac felt by the Hand as a Means of Diagnosis in Disease of the Heart,.....	41
Miasmatic Fevers, Use of Sulphate of Cinchonia in.....	460
Microscope, Use of the, in Diagnosis of Cancer,.....	140
Military Medicine and Surgery in the Crimea. By E. R. Peaslee, M.D.	321
Myopia, Lecture on.....	26
Narcotics and Sedatives,.....	170, 251
New Remedies,	319
New York Academy of Medicine, Proceedings of	65
New York Medical College,.....	397
New York Medical Times against the American Medical Association and the New York State Medical Society,.....	310
New York Medical Times and Dr. Green,	306
New York Pathological Society, Proceedings of. .55, 127, 223,	448
Nipple, Fissures of the, during Lactation,.....	157
Notice of Blackwell's Island Hospital Report,.....	383
Notice of Green and Congdon's Class-Book of Botany,.....	289
Notice of Harris' Dictionary of Medical Terminology,	287
Notice of J. B. Flint's Introductory Lecture,.....	52
Notice of Kirkbride on Hospitals for the Insane,.....	286
Notice of the Medical Report of Emigrants' Hospital,	477

Notice of Nature in Disease. By J. Bigelow, M.D.....	55
Notice of "Positive Medical Agents,"	287
Nott (J. C.) on Phlebitis simulating Yellow Fever,.....	69
Nott (J. C.) on Sloughing of the Rectum,	68
Nut for the Academy,.....	318
On the Employment of Injections into the Bronchial Tubes and into Tubercular Cavities of the Lungs. By Horace Green, M.D., &c.,	5
On the Retention of the Placenta within the Vagina. By E. H. Parker, M.D., &c.,.....	122
On the Tic-tac felt by the Hand as a Means of Diagnosis in Diseases of the Heart. By Henry Melville, M.D.....	41
Ovarian Abscess, Green's Case of	161
Pancreas, Cancer of the.....	139
Paracelsus, Smith on the Life and Writings of.....	96
Paris, Warren's Letter from.....	350
Parker (E. H.) on Retention of the Placenta within the Vagina,	122
Peaslee (E. R.) on British Military Medicine and Surgery in the Crimea,.....	321
Peaslee (E. R.) on the wretched Sanitary Condition of the Eng- lish Army in the Crimea,.....	111
Pelvic Abscess, Two Cases of.....	230
Penetrating Gunshot Wound of the Heart,.....	272
Peritonitis (Tuberculous) in Adults,	346
Personal,	398
Phagædenic Ulcer (Malignant) of the Tibia,.....	129
Phlebitis simulating Yellow Fever,.....	69
Pneumonia, Review of La Roche on.....	188
Political Appointments,.....	316
Polypus (Fibrous) of the Nose,.....	129
Polypus of the Uterus,.....	248
Popliteal Aneurism,.....	139
"Positive Medical Agents," Notice of.....	287
Practice among the Indians,.....	315
Prefatory,.....	1
Presbyopia, Lecture on.....	26
Prescriptions of Living American Practitioners, Selections from. By Dr. Horace Green,.....	169, 251
Prize Essay, Brainard's.....	318
Proceedings of the Medical Society of New York,.....	232
Proceedings of the New York Academy of Medicine,.....	65

Proceedings of the New York Pathological Society, 55, 127, 223,	448
Professors and Students,.....	78
Protrusion and Sloughing of the entire Rectum,.....	68
Pulling's Semi-Annual Report of the N. Y. Lying-in Asylum,.	166
Quarantine Removal,.....	238
Rectum, Protrusion and Sloughing of the entire.....	68
Reflections on the Nature and Curability of Cholera Asiatica,.	359
Remarks on the Pathology and Treatment of Cholera. By D. S. Conant, M.D.	81
Review of Hassall's Microscopic Anatomy,.....	48
Review of Horner's Diseases and Injuries of Seamen,.....	125
Review of Hutchison on Cholera in Brooklyn,.....	280
Review of La Roche on Pneumonia,.....	188
Review of Robin and Verdeil's Anatomical and Physiological Chemistry,	193
Rheumatic Inflammation of the Heart,	298
Report (Medical) of the New York State Emigrants' Hospital, Notice of the	477
Report (Semi-Annual) of the New York Lying-in Asylum,...	166
Robin and Verdeil's Anatomical and Physiological Chemistry, Review of.....	193
Rupture of the Bladder,	453
Sangalli on Ulcer of the Stomach,.....	302
Sanitary Condition of the English Army in the Crimea, Peaslee on the.....	111
Selections from Favorite Prescriptions of Living American Prac- titioners,.....	169, 251
Smith (Prof. A.) on the Life and Writings of Paracelsus,	96
Startling Abuses in the Retail Drug Trade,	70
Steiner (Prof.) on Chemical Action of Galvanic Electricity on Organic Tissue,	446
Stomach, Ulcer of the.....	302
Stricture of the Œsophagus,.....	56
Suit for Malpractice,.....	155
Surgery and Military Medicine in the Crimea,	321
Surgery, Chloroform in.....	143
The Health Officer,	316
Therapeutics,	67
The Transactions,	317
Tic-tac felt by the Hand as a Means of Diagnosis in Disease of the Heart, Excerpt from M. Racle. By H. Melville, M.D.	41

Tracheotomy for Inspissated Mucus,	127
Transactions of the American Medical Association,	127
Tuberculous Peritonitis in Adults. Kyburz and Bennett,	346
Tumors developed in the Brain,	448
Turpentine Bath,	68
Twins ; Arrest of Development in one Fœtus,	76
Ulceration and Inflammation of the Cervix Uteri,	385
Ulcer of the Stomach,	302
Ulcerations upon the Frenum Linguae in Hooping Cough,	395
Urethra, Gutta Percha Bougie broken in the	294
Use of the Microscope in Diagnosis of Cancer,	140
Uteri, Fissures of the, Causing Abortion,	419
Uterine Hæmorrhage in all its forms. By A. K. Gardner, M.D.	419
Uterus, Inflammation and Ulceration of the Cervix of the	385
Uterus, Polypus of the	248
Vagina, Retention of the Placenta within the	122
Vahu on Sulphate of Cinchonia in Miasmatic Fevers,	460
Valedictory Address at the New York Medical College,	255
Vegetable Parasite in the Ear,	223, 228
Volume Three,	77
Ward's Island,	76
Warren's (E.) Letter from Paris,	350
Water Dressing for Wounds,	277
Will, Influence of the, on the Activity of the Iris,	404
Women, Prof. Barker's Clinique for Diseases of	241
Wretched Sanitary Condition of the English Army in the Cri- mea. Peaslee on the	111
Yandell on Calculus in the Female,	66
Yellow Fever, Acute Phlebitis simulating	69

THE AMERICAN MEDICAL MONTHLY.

JANUARY, 1855.

PREFATORY.

WITH this number the MONTHLY commences its third volume and its second year. It seems, therefore, a fit opportunity to recur to the past and to consider the future ; to look at what we have done and what we mean to do ; and from both, if possible, to derive encouragement and confidence.

When the first number of this publication was issued, it was received with various feelings by various members of the profession. The fact of its conductors being united as instructors in a medical institution, led to the supposition that its intention was primarily, and only to praise that institution, and as a corollary to assail others. From the past history of such enterprises, it was no wonder that the feeling was entertained. Certainly, the conductors were not surprised at, and were not unprepared to meet it. That their disclaimer of any such purpose was received with doubt and suspicion, was not unlooked for ; but conscious of the correctness of their principles, and of their ability to do what they had undertaken, they have quietly gone forward, and now point with confidence to the result. It would, in fact, be impossible for any one to know, from the tone or expressions used, that they had any interests as teachers in any one institution, justice having been accorded to all, and every facility granted to others that has been asked, or that has

been known to be desired, and that sometimes to our own inconvenience.

The same thing is true of any faction, or clique, or wing of the profession, (if such factions, or cliques, or wings exist,) which has desired any such favors. The conductors, in a word, have not been slow to yield to others the facilities for reaching the profession which they have originated and maintained at no small expense and labor. Neither have they, meantime, been uninformed of harsh words and base misrepresentations, made to third parties, solely to injure the MONTHLY or its conductors, or even for so small a purpose, in one instance, as to keep from its pages an article, brief in itself, of no value to us, but coveted only because it was promised to us. In all such occurrences, the conductors have considered the impotent malice or pardonable ignorance which has given rise to these feelings or expressions, and now notice them, for the only time, merely to record their indifference to such efforts.

Of the New York Medical College nothing has been said ; but of New York city very much. This has been done with the desire and endeavor to do justice to each and every man and institution of which it has spoken. To praise all, because New Yorkers, or living in New York, would have been a course unworthy of the MONTHLY, and unjust to the profession of the country. Faults and errors are found here as elsewhere, and while we have not desired to point out every uncouth object which mars the landscape, we have not blindly shut our eyes to deformities too gross to be ignored. Of some of our neighbors our reviewers have sometimes been compelled to speak with cutting words, but never with unkind personal feelings. The doctrines were believed to be false, and therefore were refuted ; but while it is common to man to err, mistakes should be viewed with much of charity.

No city in our country possesses facilities for medical instruction which at all compare with those of New York, and these it has been the aim of the conductors to make known. Of the hospitals and dispensaries and other opportunities for acquiring knowledge, we have given more information during the past year than was ever, it is believed, during the same length of time, conveyed in a similar way. The often repeated exclama-

tion of strangers, that they did not know how much was to be seen in medicine in New York, led to this course, and the profession are now becoming aware of the facts. To other cities we have given every justice, so far as we know, but have never been led by an assumption of superiority on their part, or from any other cause, to endeavor to elevate New York at their expense. Towering as this city does above all others in such advantages, it has needed from us no coloring to make it appear greater.

But we ask attention to a brief synopsis of what has been accomplished during the past year, so far as the contents of the MONTHLY are concerned.

Of the 960 pages afforded to our patrons the past year, 573 pages, or nearly 100 pages more than one-half, is *original* matter—*i. e.* original articles and reviews. Besides, all the translations from German and French journals, which have appeared under the head of "Chronicle of Medical Progress," have been made expressly for this journal, and generally entirely re-written and condensed into the smallest space. During the year, also, an average of 5 pages in each No. has been given under the head of "Hospital Reports"—all written expressly for the MONTHLY, and obtained only through much labor. If to this we add the original matter under the head of "Editorial and Miscellaneous," we find that, in fact, only about 250 pages out of the 960 for the year have not appeared *first* in this journal, and that the remaining 700 pages are therefore, in fact, original matter. We have often marked passages and extracts from other journals for insertion, which have been omitted from the constant press of original matter. This has been a matter of regret, though apparently necessary at the time. We shall in future, if possible, extend our courtesy more in this direction.

Of the character of the original matter during the past year, perhaps it does not become the conductors to speak. We may, however, say that many of our articles have been spoken of as valuable and progressive by contemporary journals at home and abroad. Dr. Green's article on croup, Dr. Carnochan on resection of the ulna, Dr. Peaslee's on the physiology of the foetal circulation, and especially Dr. Bowditch's articles on thoracentesis, which must continue to be the standard monograph

on this important subject, have been commended on the other side of the Atlantic. We have particularized these articles only from the fact just named ; while we also have proof of the high estimate attached by the profession to the articles of Drs. Glück, Warren, Gibbs, Carey and others. We shall do, we trust, as well and, if possible, better the present year, as our experience and number of contributors increases.

We have alluded to the labor and expense incurred in collecting the facts embodied in the hospital reports. Having made these a prominent feature for a year, we now propose to give the numerous societies in the city more prominence, though we shall not neglect the hospitals. We shall always, when possible, avail ourselves of official sources of information ; but if ever obliged to rely upon our own resources, we shall strive to be rigidly accurate in our reports.

In our review department we have endeavored, as we shall continue to do, to be impartial and candid, but at the same time perfectly independent. We have not endorsed—nor shall we—the sentiments of any master, merely because they are such ; nor fail to commend what is truly valuable, because proceeding from a more humble source. We have not so understood our duty as public journalists ; and not so shall we fulfil it. We shall aim never to be personal, remembering that we address our thoughts to a learned profession, and one which condemns personalities in a scientific journal as cordially as we do ourselves. But if vanity and a domineering spirit appear to us to replace true merit in a work submitted to our judgment, and on which we feel it a duty to express our candid convictions, neither the age or position of the author, or any other circumstance, shall prevent our expression of that judgment in explicit language. We are sorry to displease any man, but there are always some who are liable to become displeased if reviewers do their duty ; and to such, displeasure may, in its ultimate effects, become the greatest boon. We hope it may ; but if not, it is their misfortune, and not our fault. We have alluded to personalities. If we have ever, for a moment, indulged in them, it is because provoked by them in the first instance, and as the best remedy in our opinion for the malady to be treated. We hope to have no future occasion for its administration.

Such having been, and such continuing to be, our motives and intentions, we again ask the aid and patronage of all who would sustain an independent medical journal ; one which sympathizes only with a progressive spirit, and not with that kind of conservatism which acknowledges no advancement ; and which will strive to check and direct the too ardent impulses of the former, at the same time that it fully recognizes all that is excellent in the latter ; a journal which still knows, as it did a year ago, " No east, no west, no north, no south," but already extends its influence to all parts of our country.

PART I.—ESSAYS, MONOGRAPHS, AND CASES.

On the employment of Injections into the Bronchial Tubes, and into Tubercular Cavities of the Lungs. By HORACE GREEN, M. D., LL. D., President of the Faculty, and Professor of the Theory and Practice of Medicine in the New York Medical College ; Corresponding Fellow of the London Medical Society ; Member of the American Medical Association, &c. &c.

THE subject which I propose, in this paper, to consider, and the anatomico-physiological questions involved in this discussion, are, I believe, of sufficient importance in practical medicine to claim the special attention of the members of the medical profession. It is a subject which has been discussed recently in the London and other foreign medical societies, and it has received, moreover, the attention of some of the foreign medical writers of distinction. It is therefore quite proper that a question, belonging as this does more especially to American Medicine, should be brought before the profession of this country. But there is another reason why I have concluded to ask attention to the subject matter of this paper.

Having by many observations established the pathological fact, that certain lesions hitherto unnoticed by pathologists, are the cause of a very common and troublesome sympathetic

affection, I prepared, several months ago, a paper on "Aphonia arising from organic lesions," which paper I thought to lay before the members of the New York Academy of Medicine. But, I confess, a recollection of my earlier experience in advancing some peculiar doctrines in medicine, positively deterred me for the time from bringing my views before the members of the profession of my own city and country. Accordingly, at the request of a corresponding member of the London Medical Society, who to some extent had become acquainted with my views, I transmitted the paper to be read before the London Society. It was received and read; and, with the discussion it elicited, was published in many of the British journals. For this paper the thanks of that society and its fellowship were voted to its author.

Fully believing that I have made other important observations, if not discoveries, of a medico-chirurgical nature—discoveries which, I believe, will lead to important changes in the prophylaxis and treatment of pulmonary disease—I have deemed it to be my duty to bring these views, *first*, before a professional jury of my own city and country, giving to them the opportunity of proving or disproving, of receiving or rejecting, the propositions advanced.

It is well known that medication of the larynx and trachea, "after the manner of Trousseau and Belloc," (as the journals, and many physicians in America, have long been accustomed to say), has been practised not only by myself, but by many other physicians, both in this country and in Europe, and with an amount of success in the treatment of some of the diseases of these organs that has been highly satisfactory; few, I believe, at the present time refusing to admit the practicability and utility of topical treatment in certain diseases affecting the upper portion of the air passages. Indeed, for a long time, it has not been deemed necessary to prove, to the more intelligent portion of the profession, the possibility of medicating the larynx and trachea by topical remedies; for, among those who have employed successfully this method of treating disease, and who have acknowledged its importance, are to be found the names of many of the most eminent practitioners of this and other countries. It has therefore been with many a

matter of much surprise, that two of the most distinguished men in Europe,—one of them the hitherto-acknowledged pioneer in this treatment,—should recently, as they have, denied emphatically the possibility of passing a sponge-armed probang into the larynx and trachea, even of the cadaver, much less into that of the living subject. I refer to Professor Erichsen of London, and Professor Trousseau of Paris!

In a valuable work recently published in London, on the "Science and Art of Surgery," by John Erichsen, Professor of Surgery in University College, and Surgeon to University College Hospital, and which has just been republished in Philadelphia, Professor Erichsen, after alluding in a favorable manner to what American surgeons have accomplished in the topical treatment of diseases of the throat, thus remarks: "Some of its advocates, however, not content with curing in this way disease that is visibly seated in the throat, pretend that the morbid action extends down the trachea into the bronchi, and that it is necessary to follow it in these situations. They accordingly speak of sponging and mopping out those parts of the air tube, and of applying the caustic solution to them, as if this were a proceeding that could be adopted with as little difficulty as passing the sponge into the nares. I cannot believe, however, that this practice, though commonly spoken about, and professedly employed, is ever in reality carried out. Any one acquainted with the physiology of the larynx, knows how acutely sensitive it is, and how, in its normal state, it resists the introduction of any foreign body by the most violently spasmodic fits of coughing; and any surgeon who has seen the effects resulting from the fair and complete inhalation of a drop or two of a solution of the nitrate of silver, in a morbid and irritable condition of this tube, must feel sure that no sponge saturated with a solution of this caustic could ever have been thrust down between and beyond the vocal chords. But not only does physiology and ordinary experience tend to disprove the possibility of such a procedure, but repeated experiments, both on the living and on dead subjects, have led me to the conclusion that it is utterly impossible to pass a whalebone, whether curved or straight, armed with a sponge, beyond or even between the true vocal chords.

I have frequently endeavored to do this in cases of cut-throat, in which, the air-tube having been laid open, the passage of the sponge could readily have been observed, and in which the facility of doing so would have been greatly increased by the larynx being no longer subservient to respiration, but in no one instance have I succeeded in passing the sponge so as to make it appear at the external wound. In the dead-house, also, I have repeatedly endeavored to pass the curved whalebone tipped with sponge into the trachea, but have never yet succeeded in doing so by employing those manipulations which could alone be practised on the living subject, or indeed by any ordinary degree of force.

“From the repeated observations I have made upon this point, I have no hesitation in expressing my conviction that the sponge has never been passed, in the living subject, beyond the true vocal chords ; though I believe it is possible that, in some instances, and, with the requisite dexterity, it may for a moment be introduced between the lips of the glottis, so as to apply the solution freely to those parts, not, however, without inducing the most intense and spasmodically suffocating cough. I have little doubt, that in those cases in which the sponge has been supposed to have been passed between and beyond the vocal chords, and in which the operator speaks of having felt the constriction exercised by these, in its entry and exit it has, in reality, not entered the larynx at all, but has been passed behind this tube into the œsophagus, the constriction being produced by its passage beyond the projection of the thyroid and cricoid cartilages, and that the caustic solution has been applied to the mucous membrane in this situation, instead of to that lining the interior of the air-passages.”*

Prof. Trousseau of Paris, also, not only renounces in favor of Bretonneau all claim to priority in medicating the larynx, but in his clinics he declares that the passage of the sponge-probang into the larynx, either in the living or dead subject, *cannot be accomplished*. With regard to the former subject, I will give Prof. Trousseau's disclaimer, in his own words, contained in a letter to myself, received a few months ago. After

* The Science and Art of Surgery. By John Erichsen, Professor of Surgery in University College, and Surgeon to University College Hospital. London, 1853. pp. 694-5.

alluding to another subject, Prof. Trousseau thus remarks : "I begin by asserting that never, either before or since the publication of your labors, have I attempted to introduce into the larynx, or into the trachea, a sponge saturated with a caustic solution. I have done it several times *after tracheotomy*, but never without having previously performed that operation.

"Now I shall endeavor to indicate the part that my preceptor, M. Brettonneau, and myself have taken in reference to *topical medication*, applied to diseases of the larynx.

"M. Brettonneau, as early as the year 1818, carried over the aryteno-epiglottic ligaments, several times a day, a sponge fastened to the extremity of a piece of whalebone, and charged either with pure chlorohydric acid or with a saturated solution of nitrate of silver. He expressed (the fluid from) the sponge at the entrance to the larynx, and the patient in the convulsive movements of respiration caused a certain quantity of the caustic solution to enter therein. He also caused vapors of chlorohydric gas to be inhaled. He did this in the treatment of croup.

"When he performed the operation of tracheotomy, in the last stage of croup, he carried with a small sponge a caustic solution into the trachea, and into the larynx, and penetrated into the trachea by the wound he had made. You will find all these details set forth in the *Traité de la Diphthérie*, published at Paris by M. Brettonneau, in 1826.

"M. Brettonneau, with an immense and deserved reputation, practised, and still practices, at Tours on a small field. I, his pupil, have been able in Paris to repeat his experiments on a far greater scale, and my labors in the treatment of croup have been published very often in the French and English journals. I need not at all refer to them in this place ; they were merely the practice of my old and illustrious master.

"But in 1830, I had for the first time occasion to treat chronic diseases of the larynx, by caustic applications, made to the superior portion of the organ, that is to say, to the aryteno-epiglottic ligaments. I made use precisely of the process which I have pointed out above in the treatment of croup, and I endeavored to express the caustic solution into the cavity of the larynx.

"The first two observations which I published on this mode of treatment can be found set forth in a well-known French journal, the *Bulletin de Thèrapeutique*. You will find them in the first volume, published in 1831, pages 163 and 276.

"I continued these labors on the diseases of the larynx up to 1835, the period at which Dr. Belloc and I sent to the Academy of Medicine a treatise on *laryngeal phthisis* and *chronic diseases of the larynx*—a work which obtained the grand prize the following year, and was afterwards published in the form with which you are acquainted.

"And, consequently, the direct introduction of the sponge, saturated with a caustic solution, into the larynx, and into the bronchial tubes, does not belong to me in any respect whatever; and even at the present time I content myself with expressing the caustic at the entrance of the larynx, or with causing powders or vapors to be inhaled.

"Accept, sir, and honorable confrère, the assurance of my high esteem.

A. TROUSSEAU,

Professor of Medical Clinique of the Faculty of Medicine of Paris."

Although Professor Trousseau here avers, that he has never cauterized the larynx and trachea himself, except through the opening made in the operation for tracheotomy, yet he does not in this communication declare that the operation cannot be performed.

Since this letter was written, however, he has, at the Hotel Dieu, in the presence of several medical gentlemen, expressed his conviction that the passage of a sponge-armed probang into the larynx cannot be effected.

The opinions of such men as Erichsen and Trousseau, on any question connected with medicine or surgery, must necessarily, I am fully aware, have great influence with the profession of both hemispheres. Their opinion on this subject, thus deliberately and emphatically given, is not to be ignored. It therefore seems to have become necessary either to relinquish our claim to this operation, or, by instituting a series of experiments, to prove, unanswerably, its easy and positive performance.

That great good may be accomplished by the topical application of a solution of nitrate of silver to these parts, when

diseased, is not denied by these gentlemen. On the contrary, Professor Erichsen declares, that "the treatment of these various chronic inflammations of the pharynx and larynx requires to be conducted by the topical application of the nitrate of silver, which may be looked upon almost as a specific in these diseases ;"* but he denies the possibility of applying the sponge to the parts below the vocal chords. On the other hand, we claim that this method of medicating the larynx and trachea is accomplished with much ease, and, ordinarily, with great certainty ; and that, by this means, diseases of these organs, which would otherwise have proved mortal, have been repeatedly arrested.

We claim, and positively aver, what is susceptible of proof, that the sponge-probang, which Professor Erichsen declares with as much positiveness, "has never been passed, in the living subject, beyond the true vocal chords," has been, in a thousand instances, "thrust down" between and beyond these chords, and has been carried not only through the trachea and its bifurcations, but at different times, and in the presence of more than five hundred different medical men, has been passed, at will, into the right or left bronchial divisions !

I shall now give the proof, not only of the practicability of this operation, which has been so positively denied, but of our ability, as Americans, to accomplish still more than this for the treatment of thoracic diseases ; to perform operations of which the conservative Englishmen and skeptical Frenchmen have never dreamed !

When Dr. Marshall Hall came to this country, he held and expressed the same opinion that Erichsen now entertains with regard to this operation ; for, when assured by Dr. Brainard of its practicability, he declared that "the passage of a sponge wet with the caustic solution into the larynx and trachea, as proposed, would prove fatal to animal life," and yet, Dr. Hall was willing to see the attempt made, for he visited my office for this purpose, where he had an opportunity of witnessing its accomplishment in many instances, and it was he who suggested the employment of a tube, that the truth of its positive introduction into the larynx might be established, as it would be

* Op. Citat. p. 694.

should the passage of the air be effected through the tube when in this position. After learning, therefore, these views of Professors Erichsen and Trousseau, I procured several of Hutchings' flexible tubes, of different sizes, and to the extremity of one of these, which is thirteen inches in length, I attached a sponge of the same size with those which are used with the ordinary throat probang.

At this time I had under treatment many patients having disease of the air passages, into whose larynges and trachea I had passed (as I believed) the sponge-armed probang in many instances. But, as other proof besides my own opinion and belief was necessary to establish this in the estimation of many, I selected one of these patients, an intelligent clergyman from Canada, and wetting the sponge at the extremity of the flexible tube in a strong solution of nitrate of silver, I passed it down to the vocal chords, through the rima-glottidis, (as I supposed) and several inches into the trachea; then withdrawing the wire from the tube, I directed the patient to close his lips and blow, and breathe through the tube. This he did for several moments, filling and emptying the chest of air repeatedly. A lighted lamp was then brought, and this he extinguished promptly, several times, by *blowing through the tube!* This experiment was performed on the 5th of October, in the presence of several physicians.

But as it was intimated by one of the medical men present that it might be averred, by those skeptical on this subject, that the light was extinguished by the air passing through the nostrils, or by the side of the tube, another patient was selected for repeating the experiment. This gentleman was the Rev. Mr. McAnn, the superior third of whose epiglottis could be seen easily by depressing the tongue. Upon the laryngeal face of this cartilage, the extremity of the tube was placed and introduced readily through the chink of the glottis into the trachea. This operation was also performed in the presence of several physicians, among whom were Dr. Sims, Prof. E. H. Parker, and several others. The instrument being thus introduced, one of the physicians closed the anterior nares of the patient, and the light was again extinguished by the expired air through the tube. A large pasteboard card, perforated in

the centre, and of sufficient size to screen the nose and mouth completely, was then slipped over the tube, to which it fitted closely; and the patient directed to blow out the light, which was accomplished through the tube as promptly as in the first instance. After all this, Mr. McAnn was requested to expand the chest, by breathing through the instrument. This was several times performed—the patient inhaling and exhaling easily and freely through the inserted tube. These experiments were subsequently repeated on some eight or ten patients, always with the same results, and in each instance in the presence of several medical men. Among those physicians who were present on one occasion or another, I may mention the names of my colleagues, Professors Barker, Davis, Peaslee and Parker, Dr. Bowditch of Boston, Professor Davis of the University of Virginia, Crawcour of New Orleans, Smith of Galveston, formerly surgeon in the army of Mexico, Rose of Indiana, Patterson of Ohio, Sims, Sayre and Minor of New York, and more than forty other physicians of this and other cities, every one of whom expressed himself satisfied with the success of the experiments, as proving the introduction of the instrument “between and beyond the true vocal chords” into the trachea of the patients. In order to test, still further, the truth of the operation, a small air-tight, elastic bag was tied over the upper extremity of the tube, and on introducing the instrument, six or eight inches into the trachea of a gentleman, this little bag was inflated and collapsed a dozen times, by the acts of inspiration and expiration on the part of the patient. In performing this last experiment, an incident occurred, (which, had the tube been shorter, might have proved an accident,) that is an additional proof of the position of the instrument. The tube which, as I have stated, is thirteen inches long, was introduced its whole length, so that the upper extremity was flush with the lips of the patient, the elastic bag, which is three inches long, only remaining out of his mouth. After the patient had filled and emptied the sac several times, I let go, for a moment, my thumb and finger hold of the extremity of the tube. Just then the patient made a strong inspiration, when the whole instrument, sac and all, was drawn suddenly in, and for a moment disappeared out of sight. Thrusting my fingers immediately

into the throat of the patient, I could barely reach, at the base of the tongue, the upper extremity of the bag, which I seized with my thumb and finger and drew the whole out together.

Other experiments, confirmatory of the above, were instituted, such, for example, as the suspension by a thread of a small ball of floss before the mouth of the tube, which was alternately drawn into and expelled from the opening by the act of respiration.

The above series of experiments were considered conclusive by those who observed them, in proving that the operation of passing the sponge probang into the larynx and trachea, as we have claimed, is positively being accomplished, and we submit to the members of the profession, whether the dogmatic assertions of Professor Erichsen, that "the sponge has never been passed, in the living subject, beyond the true vocal chords," and that the operation "is utterly impossible," has not been by these experiments disproved?

But we have declared it to be possible to do still more, for the treatment of thoracic disease, than can be effected by this operation, though its practicability be fully admitted. After accomplishing what has already been described; namely, that of introducing the elastic tube into the bronchial divisions; for it must have passed several inches into these, if it entered the trachea,—these questions occurred to my mind. What shall now hinder the introduction of medicinal agents, through this tube, into the lungs, or directly into the bronchi and their terminations? What will prevent the injecting, even of a vomica, under favorable circumstances, with appropriate remedies?

Having under treatment, daily, patients laboring under, not only chronic bronchial disease, but those affected with tuberculosis, in almost every stage of the disorder, I determined to test the effect of a solution of nitrate of silver, applied directly and freely to the bronchi in disease of their membrane; also, in disease of the lungs, to inject, if possible, the same solution into tubercular excavations.

The first trial of this nature was made on the 13th of Oct., 1854. It is unnecessary to give the previous history of this

case, in which the operations of *catheterism of the air-passages* was first performed.

The patient, a lady from Connecticut, thirty-two years of age, is in the advanced stage of tubercular consumption; a large cavity exists in the apex of the left lung, and a deposition of tubercles is present in the right. All the physical signs of both these conditions are present; my own opinion has been confirmed by the examination and opinions of several good auscultators. She has had, for several weeks past, the treatment, both topical and general, ordinarily employed in the management of such cases. Once in two or three days, the larynx and trachea have been cauterized, and the iodide of potassium, with both vegetable and mineral tonics, have been administered, and with considerable benefit. But still, the signs of advanced tuberculosis are present. The cough and free expectoration of purulent matter continue.

Oct. 13th.—To-day, instead of using the sponge-probang, I passed No. 12 of Hutchings' elastic tubes (which is thirteen inches long) through the trachea, and into the left bronchial division. Through this tube, with a small glass syringe, I injected one drachm of a solution of nitrate of silver, of the strength of forty grains to the ounce of water, into the lung. No cough whatever, or any sense of suffocation, was produced by this operation, nor did the patient observe in the least the ordinary bitter taste of the solution. A few minutes after the operation she stated that she "felt a warm sensation" in the upper portion of the left lung, but no pain, or any unpleasant feeling whatever, followed the operation. Mrs. A. did not return to have the operation repeated until the 17th, four days afterwards, when she stated that for twenty-four hours after the use of the injecting tube, her cough and expectoration were both greatly diminished, that she had breathed with more freedom than before; that these favorable symptoms had continued, though not as marked as at first, up to the present time. She was therefore much disposed to have the operation repeated. The tube was again introduced through the trachea its entire length, and at this time one and a half fluid drachms of the solution were thrown into the lungs. The immediate results were the same as at first, but after some minutes, she began to

cough, and expectorated easily, and at once, nearly two ounces of purulent matter, changed in its color and consistence, apparently, by its immediate contact with the argentine solution. Indeed, the expectorated matter presented precisely the appearance which is observed to take place with the purulent matter of an external ulcer when cauterized with the nitrate of silver. This changed condition of the expectoration was observed by several physicians who were present when the operation was performed. The relief which followed this last operation in Mrs. A's. case was still more marked and decided than in the first instance. Her cough she stated was much relieved, the expectoration yet more diminished, and her breathing was easier. A pain in the chest of which she had complained was removed; and during the two nights which followed the operation her sleep was better than it had been for a long period before. Mrs. A. remained until the 26th, during which time the elastic tube was introduced into the left bronchial division seven times, and on each occasion from one and a half to two drachms of a strong solution of the nitrate of silver were injected into the lungs. Her improvement was constant. She grew stronger, and gained flesh in this period; but, being obliged at this time to return to her home, she left with the intention of coming back to renew the treatment, in a few weeks.

The same day on which I succeeded in introducing medication into the air-tubes of the above patient, I commenced in like manner the treatment of other cases, and since the thirteenth day of October, there have been treated for a longer or a shorter period, thirty-two patients laboring under tubercular or bronchial diseases, by the direct introduction into the lungs of a strong solution of the nitrate of silver injected through the elastic tube. Of these thirty-two cases, nineteen showed unequivocal physical signs and symptoms of tuberculosis in the different stages of the disease; complicated, many of them, with bronchial inflammation. Thirteen of the number are cases of chronic bronchitis, the disease in some of them being of many years' standing. Of the nineteen cases of tuberculosis, nine of the number presented, on auscultation, the usual signs of the presence of tubercular cavities in one or both

lungs. All these cases of thoracic disease, with one or two exceptions, appear to be benefitted, some of them greatly, by this method of topical treatment.

Although a rigid and circumstantial history of these cases, and of their treatment, is being kept by my assistant, Dr. Richards, I shall not detain the reader with a relation of them, but will merely select a few whose history and sanatory condition, on coming under my treatment, were known to other medical men, for all of these cases to which I shall refer were committed to my care by their attending physicians.

The first case of which I shall speak, is that of Mrs. A., whom I first saw early in January, 1854, in consultation with a distinguished physician of this city, Dr. John W. Francis. She had suffered from chronic bronchial disease for several years; but her symptoms, from taking cold, had been greatly aggravated some few months before this consultation, and on examination at this time, there were revealed signs of extensive bronchial disease, with tubercular deposition in the apex of the right lung. Marked dullness, on percussion, was found under the clavicle on the right side, with crepitating mucous râles and prolonged expiration, indicating the commencement of tubercular softening. On the left side puerile respiration, with coarse mucous râles over the whole chest. The disease seemed to have been preceded, or attended, by follicular disease of the pharynx; for the mucus crypts of the pharyngeal membrane were destroyed, and the right tonsil had become completely atrophied. Mrs. A. was feeble and much emaciated, had a severe cough with large muco-purulent expectoration. After continuing the treatment of the patient for some time, in consultation with her attending physician, at his request I consented to take charge of the case, on condition that the patient should visit me at my rooms.

In addition to the ordinary general treatment, which it is not necessary to particularize, topical applications of the nitrate of silver to the pharyngo-laryngeal membrane were employed. These cauterizations were continued, at first, three or four times a week, and subsequently twice a week, during the remainder of the Winter and the following Spring. No diminution of the cough or expectoration occurred until the

local treatment had been continued for several weeks. Gradually both improved; Mrs. A. gained in strength and flesh, so that when she left the city in June, to spend the warm season in the country, she had gained several pounds in weight, and, although the cough and expectoration still continued, both were greatly diminished. No marked change in the patient's symptoms occurred during the Summer, but soon after her return to the city, at the close of the season, her pulmonary symptoms, from taking cold, or from some other cause, were aggravated, and her cough and expectoration were again increased. The treatment was renewed. Applications of the nitrate of silver were made to the larynx and trachea, which at once diminished, as before, the urgency of the symptoms. On the 25th of October, I introduced the flexible tube through the trachea, and conveying it down the right bronchial division, injected one and a half drachms of the argentine solution, of the strength of forty grains to the ounce of water, into that side. As in the first instance described, the irritation was much less than when the sponge-probang is used. Indeed, no cough or disturbance in any degree followed this operation. The effect on the prominent symptoms of the patient was very favorable. For twenty-four hours afterwards, the cough and expectoration were greatly diminished; nor did tightness of the chest, or any uneasiness whatever, follow the suppression of the discharge. On the contrary, the patient experienced so much relief during the subsequent week, that she did not return until the first of November, (one week afterwards) to have the operation repeated. On this day two drachms of the fluid were introduced; and thrice since, making five times in all, has the same operation been performed. Mrs. A. has continued constantly to improve, and notwithstanding the unfavorable season of the year, has certainly gained more in the last six weeks, than during several months before. But what the ultimate result will be, it is of course impossible to pronounce. Of one thing we are positive, that Mrs. A. is in much better health now, than she was nearly a twelvemonth ago, at which time she exhibited unmistakable signs of tubercular exudation, complicated with general bronchial disease.

Some months ago, General P. of Niagara, having just re-

turned from Europe, called on me with an invalid sister, bringing with them a letter from Professor Trousseau, of Paris, under whose treatment Miss P. had been, containing his full opinion of her case, and commending her to my care. The following is an abstract of the letter of Trousseau: "Miss P., whom I have examined with great attention, will hand you the consultation which I have given her. I think she has pulmonary emphysema, with chronic bronchitis, but I have not been able to find any of the signs of tubercular affection."

An attentive examination of this lady's case confirmed the opinion given by M. Trousseau. Extensive bronchial disease existed, with pulmonary emphysema—a complication which, I believe, is almost always more or less present in serious and prolonged bronchitis.

No treatment was adopted at this time, as Miss P. was on her way home, but she proposed to return in a few weeks, and have the treatment I had advised employed. But I saw nothing more of this lady until the 15th of last October, when her brother came with her to New York, and placed her under my care. Her case now presented symptoms more unfavorable than when I first saw her. She was emaciated and feeble; was harassed by an incessant cough, and had a most profuse mucopurulent expectoration. Auscultation now revealed, not only extensive chronic bronchitis, and pulmonary emphysema, but bronchial dilatation. In addition to an almost constant bronchial cough, she was subject, daily, to paroxysmal attacks of spasmodic cough, so severe, at times, as nearly to suffocate her. The local treatment, conjoined with appropriate general remedies, was adopted in Miss P.'s case. The applications of a solution of nitrate of silver were made daily, first to the pharynx, and then into the larynx and trachea. Improvement, in her case, began, as it almost always does, in bronchial disease, as soon as the small amount of caustic fluid, which the sponge will take up, had been introduced a few times into the larynx and trachea. On the 4th of November I employed, for the first time, in her case, the tube and syringe, and injected, on this occasion, two drachms of the caustic solution into the bronchial divisions. The effect of this irrigation of the pulmonary mucous membrane, was, as the patient herself

remarked, "perfectly astonishing." The cough and expectoration were both greatly relieved, the oppressive sensation about the chest, long complained of by the patient, was abated, and on her return to the office, three days after, she manifested improvement in every symptom.

The injections have been repeated every day and every other day up to the present time, and Miss P.'s improvement has been going on constantly. She is now much stronger; coughs less; has gained flesh in the last three weeks, and has exchanged her pale, sickly look, for one indicative of returning health. To-day, November the 28th, I injected, for the sixteenth time, in her case, in the presence of Professor Davis, of the University of Virginia, Dr. Minor of Brooklyn, and several other medical gentlemen, two drachms of a solution of the nitrate, of the strength of two scruples of the salt to the ounce of water, without producing the slightest cough, or any irritation whatever.

Of the thirty-two instances mentioned, of tubercular disease, it would not be difficult to select a dozen cases, from among those who have been the longest under this form of treatment, which have manifested signs of improvement as extensive, and decided, as have those cases to which we have referred. I shall, however, only allude briefly to one of these, the character and treatment of which has been observed, with much interest, by several medical gentlemen.

On the 21st of September, Dr. Varick of Poughkeepsie, placed under my care a young lady from that town, who for several years had been afflicted with chronic bronchitis of a grave character. The disease began four years ago; commencing in the form of a follicular inflammation of the pharyngeal membrane, and extended by continuity to the mucous membrane of the larynx and bronchi. The disease was attended with a loss of voice, an almost constant and harassing cough, and a profuse muco-purulent expectoration. Miss V—— presented many of the rational signs of tubercular consumption, but auscultation revealed only mucous and bronchial râles over both lungs, with vesicular emphysema and bronchial dilatation. There were no positive signs of the presence of tubercular exudation, although slight flatness, with prolonged

expiration existed on the right side. Dr. Varick had employed, in his treatment of her case, along with general remedies, the topical application of the nitrate of silver ; but as he had not been able to medicate the larynx, and the patient was not relieved, he requested me to take charge of the case. I soon succeeded in cauterizing the larynx and trachea, both of which were ulcerated, and after continuing the local treatment for two or three weeks, the voice was restored to nearly its normal condition, but the cough was not materially relieved, nor was the profuse bronchial expectoration in any degree diminished. A deep seated dull pain, under the sternum, which had long continued, and which had resisted the effects of counter-irritation, and other measures, still remained.

On the third of November, in the presence of several medical gentlemen, I passed the tube through the larynx and trachea, down to the bifurcation and injected into the bronchial divisions, two drachms of a strong solution of the nitrate of silver. From this hour, her troublesome symptoms began to improve, the cough which heretofore had vexed her night and day was arrested completely, for a period of twenty-four hours, after this first operation ; and what was equally surprising, the pain under the sternum, which had been so persistent, ceased altogether, and has not since returned.

On the second day, she coughed again, but moderately, and expectorated with more ease than before. The injection was repeated on the 6th of November, and again on the 8th, and was attended, apparently, with continued advantage to the patient. The effect of the remedy was so prompt and decided in checking the profuse expectoration, that some fears were entertained by me, in this case, as well as in that of Miss P——, that unfavorable symptoms might follow the sudden suppression of such long continued and habitual drains. But in neither of these cases, nor in any one of those similarly affected and treated, have I observed any dyspnœa or oppression of the chest whatever, to follow the diminished expectoration.

Inasmuch, therefore, as the effect of the treatment in Miss V.'s case continued to be decidedly favorable, the operations were repeated every few days, throughout the month of November. During this time, she had added about ten pounds to

her weight ; her cough was nearly gone, her voice restored to its normal condition ; and, as her whole appearance and symptoms were indicative of returning health, she was, on the first day of December, dismissed from further topical treatment.

In the treatment of the various chronic inflammations of the bronchi, I have been accustomed, for many years, to depend upon the topical application of a solution of nitrate of silver to the mucous membranes of these parts, and so uniformly has success followed its employment, that, as Erichsen has said of its effects on the pharyngo-laryngeal surface, I can affirm, that in my hands it has proved almost a specific in these diseases. Others who have given the remedy a fair trial, have borne the same testimony in its favor. Dr. Allison, of London, who has published an interesting brochure on the "Medication of the Larynx and Trachea," says : "In chronic inflammation of the larynx and of the upper portion of the trachea, the solution of the nitrate of silver has, in my hands, as in others, been very useful in bringing the disorder to a conclusion, and where that has not been accomplished by reason of its dependence upon incurable disease of the lungs, it has almost invariably afforded very considerable relief, by rendering the cough less frequent and violent, and removing much of the tickling and uneasy sensations at the upper portion of the larynx. In this form of disease the treatment is particularly suitable, whether it be simple or of a specific character. * * * * *

"In some cases of disease of the larynx and trachea, in which the symptoms inclined to the suspicion that ulceration existed, the same local application of nitrate of silver has been very useful. Old bronchial affections have in a large majority of cases been similarly benefitted."*

Professor Bennett, of Edinburgh, in his recent work on Tuberculosis, thus speaks of the effects of this local remedy : "The action of the nitrate of silver solution is not that of a stimulant, but rather that of a calmative or sedative. It acts chemically on the mucus, pus, or other albuminous fluids it comes in contact with, throws down a copious white precipitate, in the form of a molecular membrane, which defends for a

* The Medication of the Larynx and Trachea. By Scott Allison, M. D. pp. 7-8. London, &c.

time the tender mucous surface or irritable ulcer, and leaves the passage free for the acts of respiration. Hence the feeling of relief almost always occasioned; that diminution of irritability in the parts, which is so favorable to cure, and why it is that strong solutions of the salt are more efficacious than weak ones.

"It may be easily conceived that such good effects must be more or less advantageous in almost all the diseases that affect parts so sensitive, from whatever cause they may arise; and that this treatment is not adapted to one or more diseases of the larynx, but, like all important remedies, meets a general indication which the judicious practitioner will know how to avail himself of."* And he closes a work of great interest with the following "practical conclusions."

"1st. That not unfrequently diseases, entirely seated in the larynx or pharynx are mistaken for pulmonary tuberculosis.

2nd. That even when pulmonary tuberculosis exists, many of the urgent symptoms are not so much owing to disease in the lung as to the pharyngeal and laryngeal complications.

"3rd. That a local treatment may not only remove or alleviate these complications, but that, in conjunction with general remedies, it tends in a marked manner to induce arrestment of the pulmonary disease."†

Hitherto, in the treatment of bronchial disease, a difficulty has arisen from our inability to introduce, by means of the sponge-probang, a sufficient quantity of the caustic solution into the bronchial divisions; for in passing the instrument into the opening of the glottis, and through the rima of the glottis, much of the fluid is discharged from the sponge before it reaches the tracheal division. On this account I have, in a multitude of instances, when treating bronchial disease, introduced the saturated sponge, several times, at the same sitting, in order to convey an increased amount of the fluid into the bronchi, and it has frequently happened, that patients observing its effects, have returned in a few days requesting that as much of the solution as possible be passed into the wind-pipe, as the cough

* The Pathology and Treatment of Tuberculosis. By John Hughes Bennett, M. D., &c. p. 140.

† Ut supra, p. 142.

and expectoration, they have declared, are invariably greatly improved by the operation.

By this method of catheterism of the larynx and trachea, the solution is not only conveyed with more certainty and directness to the bronchial, mucous surfaces, but any amount of the medicament may, in this way, be introduced. What quantity of the solution may be the appropriate amount to be employed, in any given case; of what strength; how often to be repeated, or how long to be continued; are important questions, to be solved by future experience, and by repeated observations.

Of one interesting fact we are now fully assured, that whenever the remedy has been freely employed in the treatment of bronchial disease, the effects have been invariably salutary. Catheterism of the larynx and trachea has now been employed in my hands, in the treatment of more than twenty cases of chronic bronchitis—some of them of a very severe and protracted nature, in which from one to three drachms of a solution of nitrate of silver, of the strength of from thirty to forty grains to the ounce, have been injected every few days, in each case, through the trachea, into the bronchi; and in every instance, with not a single exception, improvement has followed the treatment. In those cases where tubercles exist, whether the exudation be in a crude state, or beginning to soften, the beneficial effects of the treatment have been, thus far, as uniform and certain, although the improvement has not been as rapid in these, as in the former cases. Most of these cases of tubercular disease are still under treatment, and the final result cannot be foretold.

In the employment of catheterism of the bronchi, by means of the flexible tube, and the syringe, repeated proofs have occurred of the presence of this tube in the trachea. The coughing of the patient before the injecting was completed, has often driven a portion of the solution, with force, through the tube, and to a distance of several feet from the patient. Several distinguished auscultators, who have been present when the operation was performed, have had the curiosity to examine the chest of the patients, both immediately before and after the operation, when they have detected readily, by auscultation, the presence of the fluid in the lungs, immediately after the injection was made.

Of more than fifty medical men, comprising many distinguished physicians of our country, who, from time to time, have been present at these operations, all, *with one or two exceptions*, have been fully satisfied that these injections were, in reality, made, not into the œsophageal tube, but into the tracheal and bronchial divisions.

Among the patients who have been the subjects of this treatment, is Dr. Pittard, an intelligent and experienced physician from North Carolina, who came to this city to be treated for a severe and long continued bronchial disease. The following is Dr. Pittard's testimony on this subject:—

“In compliance with your request, I give you a simple statement of the effect of an injection into my lungs of the nitrate of silver. The application of the remedy caused a considerable glow through the chest, which was felt for several hours. There was no irritation produced on the bronchial membrane, by the introduction of the fluid; but on the contrary, the cough was suspended, or greatly moderated for a day or two.

“It may be said that the injection passed into the stomach, instead of the lungs. This may have been possible in some other instances, but in my case there could be no doubt of its having entered the air-passages, for you will recollect that the breath was passed out through the tube, as soon as it was inserted, which may be considered conclusive evidence, besides, I tasted the nitrate of silver, in the matter expectorated for twelve or fifteen hours after the administration of the remedy.

“Very Respectfully,

“JNO. PITTARD, M. D.”

In conclusion, it is here maintained, that the direct medication of the lungs, by means of catheterism of the air-tubes, an operation I believe not before performed, has been repeatedly accomplished—that the operation may be performed by the dexterous surgeon with ease and facility, and with perfect safety to the patient, and that the results of this method of treating disease, whether it has been employed in bronchial affections, or in the commencement of tuberculosis, have already afforded the most gratifying indications that practical medicine will be greatly advanced by this discovery.

Clinical Lectures on some of the principal Diseases of the Eye. Delivered at the New York Medical College, 1854, by ISIDOR GLÜCK, M. D., Cor. Fellow of the Med. Soc. of London.

Amaurosis, Amblyopia, Subjective and Objective Light, Myopia, Presbyopia, etc.

GENTLEMEN! The natural range of the eye almost exceeds belief. The distance of the smallest stars distinctly visible to the naked eye is known to be such, that light, which travels at the rate of nearly 200,000 miles per second, occupies one hundred and twenty years in coming from them to the earth.* The unaided eye, therefore, gives us the survey of a sphere around us of that scarcely conceivable radius. But this power of vision may be materially injured by seemingly small morbid changes, scarcely appreciable; or even destroyed by an apparently unaltered structure of the parts constituting the organ of sight, or may be impeded or annihilated in consequence of morbid alterations of the functions of the various organs, reacting by means of the vascular or nervous systems on the eye itself.

If we reflect that the majority of the different diseases of the eye (with the exception of traumatic diseases produced by mechanical or chemical causes) are attributable to general constitutional causes, we shall scarcely be surprised that amaurosis is eminently so. Although the diseases of the eye may originate with and be excited by epidemic or endemic influences, or by such as in the healthy individual should be followed by no morbid reaction of a serious nature, the peculiar diathesis or constitution may give rise to a further development of the morbid organico-chemical process, and thus tend to stamp the disease with a certain character mainly dependent upon the individuality, and not proportionate to the influence encouraging or producing a morbid alteration of the parts constituting the eye, or effecting a morbid alteration of its function. Thus the various exudations on the retina and choroid coat producing amaurosis may, regarding their quality and quantity, depend upon a morbid constitution.

* Arago.

The anæsthesia as well as the hyperæsthesia of the nervous texture of the eye, shows itself under the most different forms. The former according to the cause, which may be either a central or a peripheral one.

The central causes may produce amaurosis of an intermittent or of a continued type ; the nature of the causes producing similar affections is not yet entirely known, and satisfactory elucidation is still wanted. Temporary amblyopia and amaurosis, met with after copious loss of blood and congestions, for instance in fevers before the crisis, or in intermittent fever, or in nervous and hysterical subjects, indicate an affection of the brain, but do not materially influence a favorable prognosis. But an amblyopia resulting from an exhausting disease, as phthisis, in which when near the end the patient craves for light in the bright day, affects the prognosis differently. These are mostly fatal symptoms.

Amauroses which develop themselves in the shortest time, without being the result of a morbid change in the eye itself, are more or less in connection with organic destructions of those parts of the brain and of its membranes which are connected with the organ of sight. Similar degenerations are little apparent in their first development, but they are known in the progress of the disease through various other morbid alterations of the function exerted by the brain.

While the sight of the left eye is entirely gone in the woman you have before you, she retains some vision in the right eye. You meet, therefore, in this instance of respective amaurosis and amblyopia a variety of phenomena worthy of closer consideration.

To avoid repetitions, I will confine myself to appearances hitherto but briefly mentioned. The exertion of adjusting the sight will be apparent to you by the various movements the woman performs with her head in order to distinguish an object held somewhat remote. By the transparency of the dioptric media we may judge the cause to be an incompetency of perceiving from want of an adjusting power.

Cramer asserts and proves by experiments that in the normal state of the eye, the form of the anterior surface of the lens is changed by the adjustment of sight. He allows the light to fall

on one side, and observes as usual from the other side the three images reflected by the cornea, the anterior and the posterior surface of the lens. By his ophthalmoscope, and far better by that of Donders, connected with his speculum, it is not only possible to observe the change of the image reflected from the anterior surface of the lens and its relative position, but it enables one to calculate correctly by measurement, how much the *curvature* of the anterior part of the lens is increased.

The observed eye is adjusted to the crosspoint of two threads extended very near, and one looks at the images (projected on a surface which is vertical to the axis of vision of the observer's eye) reflected from the anterior and posterior surface of the lens, which by this adjustment appear closely situated, almost in immediate nearness. If the observed eye is now directed to look in the same direction beyond the threads to a remote distance, the image formed by the anterior surface of the lens removes backwards from the corneal image, and is situated almost in the middle between both images. By this movement the image formed by the anterior surface of the lens becomes larger and duller. It is known that a more convex mirror forms a smaller image, and that therefore, the change of form and brightness of the image during accommodation to near objects, proves a stronger curvature of the anterior part of the lens. According to Cramer, the greater curvature of the anterior surface of the lens is caused by the iris. Winslow noticed that the iris is capable of exerting a pressure on the lens, in consequence of which the lens must recede without recognizing herein the cause of a stronger curvature of the exposed part of the lens, which corresponds to the pupil. Stellwag von Carion observes that a similar pressure on the lens must be the necessary consequence of a synchronic effect of the circular and radial fibres of the iris, because through it the iris thus curved anteriorly, receives the tendency to extend its surface.

Cramer asserts that during contraction of the circular fibres, the radial fibres extend as if included between two fixed points, the origin and the pupillary margin; consequently their contraction must exert a pressure on the parts situated in their concavity. When the pupil is much dilated, only the ciliary processes and the zonula Zinnii are pressed upon. When the

same is contracted, the margin of the lens is exposed to pressure, whereas by the much contracted pupil the greater part of the surface of the lens is pressed upon. As the lens is incapable of receding, the pressure must be followed by a greater convexity of that part of the lens that corresponds to the pupil. The softness of the cortical layer of the lens favors the change of form.* The space for the aqueous humor remains the same, since the space lost in the centre of the anterior chamber, through the convexity of the lens, is regained by the expansion of the iris in the periphery of the chamber. As soon as the pressure ceases, the original form of the lens is regained by the elasticity of its capsule. The force with which the iris presses upon the parts situated in its concavity depends upon the length of the curvature which the iris forms in its extension, consequently upon the greater or smaller dimension of the pupil; and upon the degree of tonicity or contraction in which the longitudinal and circular muscular fibres exist. The manner in which a greater curvature is effected, by contraction of the pupil, is the following. It appears that two points have to be considered,

1. The smaller the surface of the lenticular part corresponding to the pupil, the shorter will be *cæteris paribus*, its radius of curvature.

2. The smaller the pupil, the longer are the radial fibres of the iris, and the less the radial fibres are shortened by their contraction, the greater their power.† For this reason, also, the eye may be adjusted to fix upon a near point by a more intense light, and convergent axes of vision, by which means the effect of the orbicular fibres is increased, and pupil becomes contracted. No doubt it is attributable to this circumstance, that contraction of the pupil, produced by suddenly impinging light, adjusts the eye *for a moment* for a near point, whereas dilatation of the pupil, as caused by the closure of one eye, adjusts it for a more remote distance.

The state of accommodation may, according to the tonicity, vary very much, even by an equal dilatation of the pupil, as the effect of the orbicular or radial fibres may be a different one, on equal dilation of the pupil.

* Huschke, Forbes.

† Schwann.

Cramer asserts that the greater curvature of the anterior surface of the lens, effected during accommodation for near objects, depends upon contractile elements contained in the eye itself. He brings, in support of this view, the phenomena of the effect of belladonna. By its application, the power of accommodating for nearness is diminished. By a much dilated pupil, vision is less defined at any distance, which depends upon the less complete form of the marginal parts of the lens. Volkmann states that the effect of belladonna consists—

I. In diminishing the power of adjusting the eye to nearness.

II. In diminishing the power of adjusting the eye to remote distances.

III. In increasing the passive sight, *i. e.*, by which, without previous exertion, objects are seen distinctly.

For the sake of ascertaining whether the diminished accommodation for nearness does not depend upon the dilatation of the pupil, (admitting diffused rays) Donders made optrometric experiments, in which the rays could pass through only the central part of the lens, and convinced himself that the power of accommodating for nearness was really diminished.*

According to Cramer, there is no posterior chamber, the iris rests upon the lens, on the ciliary processes, and the zonula Zinnii and presents always a slight convexity, which it derives from the lens; one organ depends upon the assistance of the other. The iris† could not expand and contract over the cap-

* After the use of belladonna objects appear diminished, in some instances (micropic), as Donders first observed. Warlomont observed a similar case in a man of about forty, who for some time suffered from the appearance of motes. For the sake of an examination of the eyes, a belladonna solution was dropped in the eyes. After a quiet night the man passed, he was not a little surprised to find himself as if in another world; he took up a journal laid on his night table and found the letters microscopically small; he rung for the maid servant, when she entered she appeared to him like a little child ten years of age; he stretched his hand for his clothes and they appeared to him like childrens' clothes. Entering the dining-room his wife and children appeared to him like dwarfs and dolls. On his way to his physician, the horses appeared to him like dogs, and the dogs like rats; in short he felt as if transported amongst Gulliver's Lilliputians. The examination of the eyes showed but a dilated pupil. Cold lotions reduced the state of the eyes to a normal condition, with the exception of the motes.

† *The Muscular Fibres in the Bird's Eye.* Besides the transverse striped circular fibres, first closely examined by Krohn, Cramer assumes radial organic muscu-

sule without being somewhat convex, and must rest on a solid body on account of its longitudinal and circular fibres. Stellwag von Carion assumes that some fluid exists in the immediate vicinity of the lens, as if included in a channel, which remained between the iris and the zonula Zinnii. It can be proved that no posterior chamber exists, if recent eyes are frozen, and then in a sufficiently frozen state, are cut through in the axis of vision.

Arlt, however, states that between the anterior capsule, and the pupillary part of the iris, only so much aqueous humor always exists, as must enter between two surfaces according to the laws of attraction. This mediate apposition of the iris to the capsule secures to the pupillary part of the iris a steady position during the different sudden movements of the ball. If more aqueous humor should exist, the iris would constantly float in it backwards and forwards. In fact this movement is seen in the ciliary portion of the periphery of the iris, as often as it is looked at steadily after a sudden movement of the balls because a larger quantity of the aqueous humor exists behind the periphery of the iris. After shrinking or resorption of the lens, or if the iris is no longer in firm connection with the cil-

lar fibres, which are under the influence of the sympathetic nerve. But he does not seem to have seen them, at least not to have isolated them, and infers merely their existence from the enlargement of the iris, observed during pricking of the regio cilio spinalis of the spinal marrow. That this is no proof of its existence will be apparent by the following. Another muscle, also constituted out of transverse striped fasciculi appears in the eye, the analogon of the tensor choroideæ and of a peculiar nature, only according the form of the bird's eye. This muscle had an unlucky fate. Having been discovered by Crampton, it received his name (*Musc. Cramptonianus*). Its muscular nature was put beyond doubt by Krohn. Brücke subsequently made two muscles out of it, one of which should be situated between the membrana descemetii and the osseous ring, and the other between the osseous ring and the choroid coat—the first alone should be the *musculus Cramptonianus*, the other should as analogon of the newly discovered tensor choroides have that name. Cramer, however, asserts that he found this other muscle after a careful examination as Crampton described it, but he asserts at the same time, that the *musculus Crampt.* originates on that part of the choroid coat on the interior of which the ciliary processes exist, and that it *affixes* to the anterior inner surface of the osseous ring and the membrana descemetii, and not as Crampton and Brücke assert, that it originates in the interior surface of the ring, and connects with the membrana descemetii. In birds, the *musc. Crampt.* should be like the tensor choroideæ in man so intimately connected with the inner wall of the ca-

lary body, (through the zonula Zinni) it is seen floating about and even an extension of the iris through its circular fibres is not able to secure to it a steady position. It must move according to the laws of gravity, like any other moveable body suspended in a fluid. However, whether you assume a locomotion of the lens, or a curvature in the anterior surface of the lens Bowman's ciliary muscle is at any rate participating in producing the accommodation of sight. The appearance of flashes in the eye deprived of vision, which the patient complains of, depends entirely upon a subjective process.

Subjective appearances of Light and Color.

The different rays of light, the white as well as the colored impress our eyes according to the variety of their nature differently, and produce by it certain conditions which cause in our mind the perception of light and color. These different rays however, are by themselves neither white nor colored, but receive only this property by our perception through the various states produced in us, which we designate with the name of white, orange, &c.

Similar conditions of our nervous apparatus of the organ of

nalis Schlemmi, that this latter remains hanging to it when the muscle is separated, to which circumstance, Crampton is said to have drawn attention. Crampton was aware of its connexion with the choroidea, as it appears by his words. It is inconceivable how Cramer could, after his description, have assumed with Brücke, besides the Cramptonian muscle yet another, as Cramer's description of the Cramptonian muscle includes the two muscles of Brücke.

The existing confusion induced Donders to make investigations himself. It appears to him beyond doubt, that only one muscle exists, deserving the name of Crampton's muscle, (having used for investigation eyes of Calcutta-chickens, and those of domestic chickens, geese, ducks and pigeons). It originates like a neat half-feathered small muscle on the outer wall of the canalis Schlemmii, on which wall the membrana descemetii scarcely participates, and further from the outside of a fibrous-like bundle, which isolates itself from the mentioned wall, in order to proceed backwards at a considerable distance, following the curvature of the osseous ring. The anterior fibres run outwards and backwards and fix themselves at the fibrous-like texture of the sclerotica, which lines inwardly the osseous ring; the more backwards of the fibrous-like cord they begin, the more they recede in their course, so much so, that the last in following the curvature of the sclerotica, fix themselves to the outside of the choroid-coat, on that part where the osseous ring made room in the sclerotica to a layer of true cartilage, commonly described as horny.

vision may be produced by processes which take place in our organism, caused by pressure for instance, electric shocks, and affection of the brain, which exert an influence on the corresponding nerves, and are produced by their own activity. The conditions thus produced are called the subjective appearances of light and color. They are exclusively products of the organic activity of the organ of sight and not qualities of the outer world.

Many subjective phenomena prove that the state of the nervous apparatus of the eye, presents itself to the mind as the appearance of light and color, and that the external light is no longer sufficient to produce them, if the subjective conditions are wanting. Thus :

If the retina is paralysed no light is capable of producing the sensation of light and color ; if the same is but torpid an intense light is necessary to produce only a moderate perception of light. A person, therefore, whose retina is in a torpid condition sees well only in the *bright noon*. (Hemeralopia).

If we leave a very bright room for a darker one, the latter appears to us perfectly dark, because its light is not sufficiently strong to impress the retina and produce an activity in it, as it is benumbed by the intense degree of light until the retina has recovered. The wise arrangement of the frequent movements of the eyelids, to prevent a continual exhaustion of the nervous power will be apparent, and is necessarily obvious.

The intensity of light, be it from a glaring snowfield, or any other strongly reflecting surface, may exhaust the power of the nervous apparatus, and thus produce (snow blindness) Nyctalopia. Some forms of it are so severe, that even the ordinary daylight cannot be borne.

If you look long and continually on a light, bright field, the power of vision diminishes and disappears ultimately, and the field of vision appears cloudy, and subsequently bright, and again turns dark in consequence of a passing or temporary exhaustion of the retina, an appearance which occurs in persons suffering from debility in consequence of general exhaustion.

If we remain for a long time in a dark room, and change it suddenly for a very bright one, we are dazzled by the light, although it may not exceed the intensity of the ordinary light,

i. e., the retina debilitated by the continued privation of the excitement of light, looses its power of activity, and thus becomes overexcited by the respectively too intense light and, under very favorable circumstances, even paralyzed.

In May, 1849, at Watz, in Hungary, a man 37 years of age presented himself to me for medical examination, in presence of the other members of the military commission, in order to be enlisted in the Hungarian army. He left the prison but a few weeks previous, where he was detained for a period of eleven years. I could conscientiously support our commission in its intended refusal of his entry into the army, on account of his previous misconduct, by proving his physical inability of serving in this way. I desired him to look through the window, where a strong light came in; after a minute I turned him round and asked for the number of fingers I held before his eyes; he not only could not tell the number, and not perceive the hand which I made him grasp with his own, but he was not even after ten minutes capable of finding his way to the door. He retired, or rather was led away, satisfied with the melancholy conviction of his incompetency. I was led to this trial by observing his intolerance of light.

The contrasting change of light and darkness is very trying for the organ of vision, and debilitates it considerably. For this reason lamps covered with non-transparent shades are injurious to sight, as merely the table and some parts of the room are illuminated well, whereas the other parts of the room are dark.

Much more appropriate, and of more advantage, is a shade of light blue color, on a very intense light, which mitigates the light by changing its quality, with less diminution of its quantity.

A similar injurious effect is produced in weak eyes, if only one light is used in a large room, the contrast being apparent by the insufficiency of such an illumination.

The activity in the retina is often produced by previous intense excitement, and its subsequent effect is displayed in an after-tone of an intense excitement. They are, for instance, the strongest after an over-exertion of the eyes on a previous day, by cerebral congestion, after the use of narcotics, as belladonna, hyoscyamus, after inflammations of the eye, choroiditis, retini-

tis, &c. The impressibility to external light may be almost, or even entirely abolished, and the mentioned appearances may still continue and form the so-called *chrupsy*, (flashes of light,) and *chromopsy*, (appearance of color,) which are most complained of in the *erethic* and *congestive* form of *amaurosis*.

The sensation of external light does not produce the representation of a certain condition of our peripheric organ of sight, but causes the representation of something *objective*, implying the existence of an excitement situated externally, and not in us. If a second luminous point appears before the eye, corresponding entirely in quality to the first one, we have no longer, as before, a single sensation of light, the intensity of which should be merely the double of the first; but we receive two isolated impressions, existing contemporaneously and with another. This property belongs exclusively to the organ of sight.

If two sounds, similar in quality, of equal pitch and vibration, touch the ear, we do not distinguish two single isolated impressions, but the intensity of the perceived tone is augmented proportionately to the force of the second impression. Similar are the impressions of the organs of taste and smell.

The organ of sight possesses unities of sensation. Several similar impressions received synchronously, do not sum up to a *resultant*, but remain isolated and separate to the perception. A tone is to us something objective, and we hear the different tones of an accord synchronically; we may hear single tones out of an orchestra, but there is no relation in the synchronic juxtaposition; if we abstract from the intrinsic relations of its value, we can say only that they exist contemporaneously with another.

In the unity of sensation, produced in the organ of sight, there are *local*, *spacious* relations. We receive the impressions as something objective, localized in space. This localization of each unity of sensation consists in the representation of its three several relations to those of others. We call it the *value* in three dimensions.

All sensations of light, synchronically existing in the representation, do not form a mere contemporaneous juxtaposition, but they produce the representation of a local juxtaposition in a

certain order, each unity of sensation having a certain value in the dimensions of length, breadth, and depth.

The perception of light depends upon the influence of waves of ether on the retina ; the intensity of the perception corresponds to the intensity of vibration ; the difference of the length of the waves causes the different qualities of light. The perception of unity depends upon the arrangement and relative position of the dioptric media. One and the same impression of light may have many different values, in length, breadth, and depth, and those three values are qualities of the impression of light.

All relations of size and form, to the representation of which we are forced by impressions of sight, are but *space-value* of unities of perception. We do not perceive absolute sizes, but in the perceived relation of sizes we become conscious of spacious relations of points, unities of perception of our peripheric organ of sight.

The last causal moment of every psychic state of excitation, the influence of an external excitement, we may consider as a mutual re-action of two bodies. The result of each mutual re-action is not dependent on one body alone, but always on both. If we know that the result of two re-actions following each other be different in two bodies, although the influence of one of both objects be similar in both instances, we may infer that in both instances the other body participated, in a different manner, in the mutual re-action. The simplest perception of light, the final result of a mutual re-action between a luminous point and the peripheric organ of sight, may have the most different values of space, without its other properties undergoing a modification. The luminous point may exert its influence always in the same way, as long as it appears in the field of vision ; the representation caused by the perception being different in the value of space, in comparison with the supposed real value of space, we infer that the second body, *i. e.*, the peripheric part, which came in mutual re-action, exerted its influence, or behaved in a different way, and by doing so caused the questionable diversities of the otherwise similar psychic state of excitement.

In order that objects should be seen single, it is necessary

that the axes of vision should cut each other in a point of an object situated at a distance commensurate to the refractive media and the power of accommodation. According to John Muller, only such points of an object can be seen contemporaneously which lay in the periphery of a circle described by the fixed point (of the object) and the centre of both lenses. This circle Muller called Horopter. The protuberantia scleroticalis described by Ammon* is a distinctly visible enlargement of the sclerotica, and later of the retina,† of the foetal eye, until the eighth month, and exists at the external posterior circumference exterior to the macula lutea—this protuberantia scleroticalis, considering a horizontal middle section, seems to cause a difference in the curvature of the external and internal half of the retina, so much so, that the external half seems to describe a wider circle than the inner one.

Although this protuberance disappears in the subsequent development, its existence in the previous stages of development could easily awaken the supposition, that even in the fully developed state of the retina there may exist a difference in the curvature of its outer and inner half. Such a difference needs only to be very small. The small axis of the ellipsis formed by the retina needs to be only very little exterior to the centre of the macula lutea in order to be already of a considerable influence on the form of the horopter, as the distances of the images of two points on the retina are extremely small, compared even with the smallest distance at which objects are situated before the eye. Baum found his supposition of the form of the horopter verified by experiments.‡

Meissner designates with the name of horopter that part of the space in which lay those points which, with the fixed point, are seen contemporaneously simple; and admitting for the sake of argument, what generally is not true, that the horopter has no extension in the third dimension, it is a surface formed and situated somehow in which a changeable fixed point is situated,

* Zeitschrift für Ophthalmologie, II. p. 503.

† The retina affixes to the sclerotica only by degrees.

‡ Brought forward and ably discussed by Dr. George Meissner, in Beiträge zur Physiologie des Sehorgans Leipzig, 1854, that really proves a valuable addition to the Physiology of sight.

the nature of which is to be considered. The centre of that part of the space which presents to the observer always to the utmost merely the dimension of length and breadth is the fixed point, and if you imagine that surface in both its dimensions, divided by a horizontal and vertical cut running through the fixed point, the horizontal line of division forms Muller's horopter; and under the supposition that the surface to be investigated be plane or irregularly curved, the perception of the horizontal and vertical line of transitions give sufficient information of the quality of the surface itself.

The child in which the difference of curvature, resulting from the existence of a previous protuberantia sclerotalis, still exists, has a near horopter; it fixes objects, and amuses itself with those situated closely. With more advanced age this difference of curvature becomes gradually equalized in both halves, and at last, perhaps, disappears altogether. In harmony with this process, the middle horopter (Mesoropter) removes farther with the progressing development. The dioptric apparatus of the organ of sight causes with advanced age presbyopia, and with it a remote horopter.

Sichel distinguishes a myopic and presbyopic amblyopia: to understand these forms, it will be necessary to make you acquainted with the state of vision called Myopia, and another named Presbyopia.

Myopia.

Near-sightedness is that condition of sight in which small objects appear clear and defined, distant ones, on the contrary, obscure and ill-defined, or not at all. This state of vision is produced by such a physical change or relative position of the refracting media of the eye, by which only rays of light coming from near objects can be united to form an image on the retina, whilst the images of distant objects fall on the vitreous body before the retina, forming on it circles of diffused rays of light. The myope has a near and distant point of distinct vision. Those points are often only very little distant from each other, being sometimes but three to five inches for the near point, and eight to twelve inches for the distant point. The near-sighted person sees small objects more distinctly than the far-sighted

one, because they appear to the former under a greater angle of vision when looked at very near, and the same sees small objects in a subdued light clearer than the far-sighted one, because an object when held close to the eyes, sends more rays of light to the eye than if held at some distance. The near-sighted one reads easily, therefore, when the far-sighted one is no longer able to do so ; near-sighted ones see objects double or multiplied on account of the several circles of diffused rays which form themselves in consequence of the irregular curvature of the refracting media, and form a single defined image only by a correct accommodation of sight.

Sometimes both eyes of an individual have an unequal refracting power ; so much so, that the one eye is comparatively more near-sighted than the other. This condition of the eyes is congenital, or the fault of an unilateral use of the sight during reading, writing, drawing, painting, looking through the eye speculum, microscope, &c.

This kind of myopy occurs frequently in juvenile individuals, and is to be treated as soon as its appearance threatens, by change of occupation, abstinence from reading, writing, chiefly in the subdued or even in the bright artificial light. The accommodation to a distance is very useful, and the best means of increasing the capacity or range of vision. Individuals at work by the use of magnifying-glasses, as engravers, etc., will derive a benefit by changing them for those of a different focus.

Upon individuals suffering from habitual congestion of the brain, the very injurious habit of smoking will in no instance exert more its obnoxious effect than in this kind of myopy, where besides the congestion it produces, the sight is more or less excited through the cigar and its fumes for an accommodation to nearness.

Ruete assumes three kinds of near-sightedness according to the causes producing them.:

The first is occasioned by spasm in the ciliary nervous system by which no doubt a forward motion of the lens takes place ; such a near-sightedness is mostly of an intermittent character, and depends probably upon an affection of the sympathetic nerve. The cause of this affection may be situated in

the eye itself, or in parts of the nerve remote from the same, and therefore reacting on the ciliary nerves by irradiation.

The second species of myopy depends upon such organic changes of the refracting means of the eye as increase their refracting power. They may be of different nature, increasing the density of the refracting media, or prolonging the diameter of the optic axis.

The third kind of myopy is produced by an improper use of the sight, and develops itself by degrees; chiefly with persons of certain conditions and occupations in which the eyes are strained unilaterally looking at near and small objects, thus neglecting the exercise of seeing and adjusting the eye in and to a distance; as artists, writers, savans, etc. The eye is active by looking through convex as well as through concave glasses, as it accommodates itself to seeing at a distance with the former, and to looking near with the latter. The continued use of convex glasses increases myopy, whereas the protracted use of concave glasses increases presbyopy.

Far-sightedness, presbyopy designates the state of vision in which remote objects are clearly seen, whereas the power of adjusting the sight for near objects is very small, or even wholly wanting. The insufficient refraction of the media causes the image to fall behind the retina. Like the normal eye, the presbyopic one has no distant point; but the near point at which objects can be recognized distinctly is at 15-60 inches, consequently further than the normal eye. The accommodating power is therefore debilitated, paralyzed, although the eye is in other respects healthy. In newly-born children the axes are parallel, as their eyes did not yet learn to fix objects in changeable distances. The equal tendency of all the muscles of the eye, the parallelism of the axes of vision, is a constant one, seen during the movements of the eyes in different directions, until the child learns how to subordinate the muscles to his will, and hence objects must appear to children double and indistinct, till they learn by degrees to give to the axes of vision a proper direction, in order to see the objects simple. Children seem to be far-sighted in their first year; their visual axes are parallel, and they seem to look seldom at near objects. In advanced age the power of accommodating for nearness is

lost ; hence the removal of a book when reading, The occupation with remote and larger objects, as that of hunters, seamen, shepherds, very often causes neglect of accommodating the sight to objects situated near. A constant parallelism of the visual axes produced by an over-weighing of the external muscles, causes a morbid presbyopy. It becomes easier in this state to direct one's sight, and accommodate it to greater distance and objects situated in it, than it is to look at objects closely situated. Myotomy corrects this error by admitting the convergency of the visual axis, and thus facilitates the accommodation for near objects.

Circles of diffused rays of light are formed by imperfect accommodation, when the image falls before or behind the retina, and the diverging rays before or after the union of the rays of light necessary for the formation of an image fall on the retina, thus forming an imperfect, and with dioptric colors, a mixed image.

On the tic-tac felt by the hand as a means of Diagnosis in Disease of the Heart ; an excerpt from the recent work of M. RACLE on Diagnosis, with a few comments. By HENRY MELVILLE, M.D., Edinburgh.

During the year 1852, a letter from a friend, at that time residing in Paris, made me acquainted with this mode of examination, adopted by M. BOUILLAUD, in general terms. Since then I have been in the habit of paying some attention to the phenomena so presented by healthy and diseased hearts, but without arriving at any results of diagnostic value. This has arisen, undoubtedly, from the want of sufficient information as to the points to which the observations made should be directed, and the connection between the phenomena observed and their interpretation.

It was therefore with much pleasure and satisfaction that I read, in M. Racle's recent admirable work on Diagnosis, the following account of M. Bouillaud's method ; and believing it to possess great practical advantages, apart from the interest of

its novelty, I have endeavored to translate it for the pages of the MONTHLY, in the hope that it may be acceptable to its readers.

“M. Bouillaud, who has studied this physiological phenomenon during six or seven years only, has not as yet published any of his observations on the subject, and no one else, to our knowledge, has paid any attention to it. The learned Professor has kindly permitted me to make known in this work those results, altogether novel and unrecorded, which he has obtained.

“Every one knows that on applying the hand over the precordial region there is felt, what is called, the beating of the heart; but hitherto we have limited ourselves to establish by this means the stroke of the apex, and to ascertain the force, the extent and the intensity of this stroke; we have attempted nothing beyond this.* However, if we feel with attention the heart's action, we shall perceive distinctly two beats, two movements conneted one with the other, and which convey a sensation of tic-tac so like that which we discover by auscultation, that it appears as if we *heard* the heart with the hand. This is by no means an acoustic phenomenon, it is simply the sensation of the double movement of the heart. This perception obtained by the nerves of general sensibility, and which seems to be transformed for the observer into a sonorous phenomenon, is altogether comparable to the perception of vibrating and sonorous rales, of the frictions which occur in the pleura, and which we can appreciate by the application of the hand;† it resembles, also, the non-sonorous grumbling of the intestines; we know indeed that it often happens, that on pressing on the abdomen we think we hear this grumbling, while in reality we only feel the displacement and the movements of the contained gas and liquids, and which other persons do not hear, because they do not feel them. The perception of the beatings of the heart of which we now speak, is a phenomenon of this kind; it falls simply under the category of tactile phenomena, as well as the crepitation of fractured bones, subcutaneous emphysema, &c.

“In some individuals, this double movement is scarcely perceptible; in others it is so strong that it seems as if we held the heart in the hand, and that we felt it contract and dilate alternately.

“These two movements are closely connected, one with the other, and are followed by a pause sufficiently long, the great rest of the heart; they correspond to the systole and diastole of the organ, and are synchronous with the first and second sounds.

* See *a* on page 44.

† See *b* on page 44.

"They have, like the sounds of the heart, different characters ; the first is dull, prolonged, the second is shorter and sharper ; both resemble the noises (*claquements*). which we perceive on working a suction and forcing pump, and which are due to the alternating movements of its valves. We attribute them, like the sounds of the heart, to the alternating tension of the valves, and we retain for them the name *claquements* of the valves, or *valvular*, which has been so properly given to them by M. Bouillaud.

"They have not the same seat ; the first is more particularly perceptible at the apex of the heart, the second at its base. M. Bouillaud attributes the first to the tension of the auriculo-ventricular valves during the systole of the heart, it corresponds also with the stroke of the apex ; the second has its greatest intensity at the base of the heart, and on a level with the ventriculo-arterial orifices ; it occurs indeed in these orifices and results from the tension or fall of the sigmoid valves of the aorta and pulmonary artery.

"Each of them by its seat and moreover, by its character, is entirely in accordance with the nature of the valves which produce it. The first movement is dull, deep, and has something greasy in its character, which reminds one of the thickness, and greater laxity of the auriculo-ventricular valves. These characters seem also to be due to the fact, that these valves are inserted in the thick, soft and fleshy walls. The sharpness, the shock of the second movement depends upon the thinness, the rigidity of the sigmoid valves, and we can readily perceive that they occur in superficial organs with thin parietes and of a certain firmness, (the arterial parietes).

"The characters of these movements vary with the condition of the valves, and of the parts in which they are inserted ; they become more marked if the valves are indurated, have become cartilaginous or osseous ; they are smothered, roughened, if these are thickened, have become soft, &c. ; finally they disappear more or less completely, sometimes one, sometimes the other, if the valves are destroyed, cease to act freely, &c. We can derive, in a diagnostic point of view, very valuable information from the modifications of these movements as perceived by the hand."

To this description M. Racle adds the following note, furnished by M. Bouillaud himself :

"If we accustom ourselves, by means of continued and attentive practice, to the exploration of the different movements of the heart, by the application of the hand, (*the touch, palpation*,) it will become easy to distinguish the ventricular movements of systole and diastole, from the movements of valvular play, the essential cause of the double sound known under the name of

the tic-tac of the heart, which consequently, more appropriately deserves the term *valvular tic-tac*, which we have for a long time bestowed upon it. In the study of this new phenomenon which engages us, as well as for that of all the phenomena of observation, nothing, besides, can replace personal practice, whether we have in view that which promotes at the same time the education of the mind and the intelligence, a double education so laborious, and therefore so often neglected or unfinished.

“Be this as it may, since our attention has been directed to the exploration of the valvular action, by the method of palpitation, we have had ample opportunity to ascertain, appreciate and determine exactly the modifications which the movements present, when thus perceived in the principal valvular lesions, and to apply these modifications in the diagnosis of these lesions. Every day, in our clinique, we have been able to announce the condition of the valves, after the application of the hand on the region of the heart, and afterwards to confirm this diagnosis by means of the signs furnished by other modes of exploration.”

a. The method of examination by *touch* or *palpation* is familiar to all diagnosticians, and is successfully employed by many in determining several conditions or variations of the heart's action, as well as other physical phenomena exhibited in abnormal states of the thoracic and abdominal viscera. In *hypertrophy* of the heart for instance, it is essentially useful ; although not so stated in the text, this disease is probably indicated, or intended so to be, by the enumeration of the characters given.

b. In connection with this point, the following remarks by Dr. Stokes, contained in his recent work on Diseases of the Heart, are extremely valuable and full of interest. In treating of *Pericarditis*, he says :

“Phenomena discoverable by touch. When the hand is applied over the region of the inflamed organ, sensations as of two surfaces rubbing and grating one on the other are often perceptible. They imply that the lymph is in a state of unusual consistence or hardness, and probably also that the surface is but little bedewed with serosity. And hence, as might be expected, they are generally better developed during the earlier periods of the disease than when, after the absorption of the serous part of the effusion, and under the process of cure, the surfaces again come into contact.

“Among the conditions which favor the production of friction signs perceptible by the hand, the resisting nature of the organ covered by the inflamed membrane occupies a prominent place ; and it is probable that the greater frequency of these signs in

pericarditis, rather than in pleuritis, is referable to the unyielding nature of the structure of the heart, as compared with that of the lung. Whoever has once grasped the living heart of an animal, can understand what a hard and solid mass it presents during the systole. We further find that in the case of *peritoneal* friction, the sign has been principally observed where the inflamed membrane invests some organic tumour or solid viscus. Can we then explain the rarity of the tactile friction signs in the advanced and resolute stages of pericarditis, by supposing a weakened state of the heart, which interferes with the vigour of its contractions, and renders it, during the systole, less hard and resisting?"

Although in the announcement contained in the foregoing article from M. Racle's work, there is no very detailed statement given of the extent of the value of the several indications afforded by this mode of examination, enough is said to guide an intelligent observer in constructing a scale of phenomena for himself, in determining the amount of valvular disease as well as its special forms. As a corroborative method of diagnosis, it possesses great advantages and opens up a large and interesting field of investigation to the pathologist. Nor is it without peculiar claims to our consideration, in those cases in which the formality of a stethoscopic examination becomes irksome or alarming to a patient labouring under heart disease; at all times they are anxious, nervous and easily excited, sometimes prejudicially so, particularly when suspicions may have been awakened that the special form of disease with which they are afflicted is incurable.

In such cases a preparatory examination by touch may pave the way to the more formidable or repugnant auricular and stethoscopic exploration, or may, if we acquire by practice the dexterity professed by M. Bouillaud, altogether supersede the necessity of the latter.

Unquestionably the hand will require as much and even more education than the ear; and with those in whom the sensitiveness of the hand is impaired, the appreciation of the delicacy of the phenomena will be very difficult and unsatisfactory. But the latter objection obtains in some instances to the stethoscope; I have seen many physicians who have failed to recognise or distinguish the distinctive characteristics of cardiac and pulmonary sounds.

I venture to suggest that some little tact is necessary in the mode of conducting this examination ; it being a matter of no small importance to attend to the position of the patient ; the part of the hand to be employed the point of touch, and even the choice of hand.

The position of the patient. This should be in the erect posture ; standing if practicable as being generally more convenient to the observer. The body should be slightly inclined forwards, so as to lean somewhat on the examiner's hand. If from debility, or other preventing circumstances, the erect position is insupportable or inconvenient, then the examination being necessarily conducted with the body recumbent, the prone posture should be assumed, the examiner slipping the hand under the chest.

The part of the hand to be employed. To those who possess the advantage of a soft and sensitive hand, this will not be a matter of much moment, any portion of the palmar aspect will answer equally well ; but to those not so fortunately endowed, it may become necessary to select points of contact. It will be found that on extending the fingers, moderately separated from each other, and placing the palm of the hand in proper position, that the prominent masses of muscles connected with the thumb and lying along the outer margin of the palm, will naturally fall on the two points where the impulse of the base and the apex are most distinctly perceived, and thus it will be clearly defined. With some it may be preferable to use the fingers ; the index and middle one will perhaps be the most convenient, but they are by no means so useful for the purpose as the whole palm. It may even be advisable to use the left in preference to the right hand, the integuments on the former being generally softer and more sensitive. According to the hand selected, the examiner's position in relation to the patient, must be on the right or left side.

The points of touch. To determine these with precision, is a point of much importance to the success of this method of examination, and not only requires us to be familiar with the normal relations of the heart to the thoracic parietes, but to bear in mind that these relations are liable to frequent alterations by disease. I may therefore be permitted to recite the

former, and briefly allude to some of the latter, as prefatory to indicating the best points of touch.

The heart, then, is placed behind the left half of the sternum and the sternal attachments of the superior ribs. The *base* of the heart, the seat of the second impulse, lies partly under the sternum, nearly on a level with the superior margin of the sterno-costal articulation of the second rib, on the left side extending under the cartilage of this rib and reaching slightly below it. The axis of the heart is somewhat diagonal; the apex is found in the fourth intercostal space, just under the fourth rib. It bears the same relations to the nipple of the mamma in males and females, provided that if the latter is not too large, or displaced from its normal seat. A vertical line dropped from the nipple, will pass over the spot occupied by the apex. The distance from the nipple to this spot will vary according the height of the individual. Here it is that we shall define most clearly the stroke of the apex against the thoracic parietes. The superior or left border of the heart will be found to pass on the inside of the nipple from the inferior border of the second rib to the fourth, where it terminates in the apex. The inferior or right border is partly under the sternum, and partly free, lies in contact with the liver and transverse colon, the diaphragm being interposed.

From this description it will be inferred that we should seek for the phenomena of the second impulse at the seat of the base and of the ventriculo-arterial valves, or at the articulation of the second or third costal cartilages, for those of the first impulse between the inferior extremity of the sternum and the apex, or even at the epigastrium. The intimate relations subsisting between the diaphragm with posterior surface of the heart render the sounds and impulses at the auriculo-ventricular valves more appreciable here.

The heart may be misplaced congenitally, or by disease or its results. Effusion in the left pleural cavity pushing it towards the right side. Enlargement of the liver pushing up the apex, etc. It will be necessary to ascertain the existence of these or similar displacing causes, and to search dilligently for the abnormal position of the tactile phenomena.

PART II.—REVIEWS AND BIBLIOGRAPHY.

"Mullius addictus jurare in verba magistri."

The Microscopical Anatomy of the human body, in health and disease. Illustrated by numerous drawings in color. By ARTHUR HILL HASSALL, M. B., M. R. S. E., &c., &c. With additions to the text and plates, and an introduction containing instructions in microscopic manipulation, by HENRY VANARSDALE, M. D. Two vols., 8vo. New York : S. S. & W. Wood.

The original English edition of this work was published in 1849—the first volume containing the text and the second the plates, as is the case with the edition before us. We formed a high opinion of the work, and commended it to our pupils as the only completed work, at the time, on its subject, in the English language. Its high price, however, precluded its possession by more than a very few, and therefore it was comparatively but little known in this country.

The American edition was issued three years since, and at a comparatively very low price. Still, however, it has not secured the notice it deserves, and we therefore call attention to it here. By adopting a slightly larger page, the American editor has not increased the size of the first volume, though he has prefixed to it an introduction, and added several pages of notes ; making in all 548 pages. He has also added 10 plates, including 47 figures, to the second volume ; making 79 plates in all.

In the introduction of 28 pages, the editor has furnished some practical hints on Manipulation in Microscopic Anatomy, that the student may not be obliged to consult another work on this subject previously to commencing his investigations. Under this head he considers :—

- I. Microscopes and their Accessory Instruments.
- II. The preparation of objects.
- III. The preservation of objects.

The remarks and directions under these heads are discriminating and judicious. Especially do we agree with him that a *cheap* microscope should never be made to answer, when the student is able to purchase one of the best quality ; and that a good one is needed to *begin with*, as well as afterwards. His remarks on English microscopes are derived principally from Mr. Queckett's Practical Treatise

on the Microscope,—and which we recommend to all who would become thorough microscopists. But he has added a comparison of the instruments of English makers, with those of Oberhauser, Nachet, Brunner and Chevalier in Paris, and of Spencer in this country. We have before stated our appreciation of Ross' instruments,* as being equal to any yet constructed, and find the same admitted here. Spencer has, however, succeeded in obtaining a larger angle of aperture to his object-glasses than any other maker; and for sharpness of definition and power of penetration, they are “not excelled by any in the world.” We believe this assertion to be due to our countryman—and surely this is sufficient praise—but to the indiscriminate laudation of his lenses, as being entirely and immeasurably superior to all others, which has sometimes been accorded in this latitude, we have never been able unconditionally to assent.

The unfortunate custom of speaking of an object-glass as an *inch*, a $\frac{1}{2}$ *inch*, $\frac{1}{12}$ *inch*, &c., while the same denomination (e. g. the $\frac{1}{4}$ *inch*) of different makers, differs much in focal distance, and never corresponds precisely with the name—is alluded to. Most object-glasses are *triplets*—i. e. consist of *three* lenses to be used in combination. Now if such a combination has a certain magnifying power—say 100 diameters—and a *single* lens also magnifying 100 diameters be found to have a focal distance of $\frac{1}{10}$ *of an inch*; then the triplet object-glass will be called the $\frac{1}{10}$ *of an inch*. In other words, the name indicates what the distance *would be* if a *single lens* of the same power were used instead of the *compound object-glass*.

In the first part of the original work, the author considers the fluids of the human body, viz.: Lymph and Chyle, Blood, Mucus, Pus, Milk, Semen, Saliva, Sweat, Bile, and Urine. To this portion the American editor has added but 4 pages; upon the method of observing the circulation of the blood, and examining semen and urine, and on the preservation of the fluids just mentioned for future examination. Some of the author's ideas, as in regard to the mucus corpuscle, &c., are incompatible with the more reliable observations of Kölliker and others. The author believes also in the “*animality*” of the spermatozoon, an idea not now received by the best physiological authorities.

In the second part of the work, the author considers the solids of the human body, in the following order: Fat, Epithelium, Epidermis, Nails, Pigment cells, Hair, Cartilage, Bone, Teeth, Cellular or Fi-

* February number of MONTHLY, p. 9.

brous tissue, Muscle, Nerves, Respiratory organs, Glands—and the organs of the Senses. An appendix of 14 pages is also added, containing new additional views of certain subjects treated in the body of the work.

We have considered it unnecessary to regard Epidermis as distinct from Epithelium, for any histological purpose; the former being merely a variety of the latter. "Cellular or fibrous tissue," is the name very loosely applied by the author to include two entirely distinct tissues—the white fibrous tissue, and the yellow (or elastic) fibrous tissue. By the "inelastic or white cellular or fibrous tissue," he means the *white fibrous tissue*; and by the "elastic cellular or fibrous tissue," he means the *yellow (or elastic) fibrous tissue*. The term *cellular* is inapplicable to both these kinds of tissue; neither presenting any cellular arrangement. "Cellular" was once the term applied to the compound tissue now known as the *areolar* tissue; and which consists of the white and the yellow fibrous tissues combined. The author indeed incidentally admits this, and yet uses the words *cellular* and *fibrous* as synonymous terms.

The author also inclines to believe that the branches of the sympathetic nerves, so called, in the abdomen and elsewhere, are really not nerves, but mere bundles of *non-striated muscular fibres*, since they cannot be distinguished from the latter under the microscope!! (p. 383). His arguments are, however, at once nullified by the fact—opposed to his own observations, though well established by those of many other microscopists, including Prof. Kölliker—that the fibres of the great sympathetic are *not* identical with the smooth muscular fibres in their appearance under the microscope. The American editor has not entered his caveat against this opinion, and therefore, we may suppose, endorses it. The author has, however, manifested that candor worthy of his high character as a scholar and a lover of truth, in the appendix, where he recants his views (opposed to those of Drs. Carpenter and Sharpey) in regard to the structure of the striped muscular fibilla; and he has doubtless ere now seen cause also to change the opinion just objected to.

The American editor's notes on the subjects of the second part of the work, are more copious than on the preceding portion. They however refer almost exclusively to the preparation and manipulation necessary to demonstrate the several tissues and parts under the microscope; and to the means of preserving the latter for future examination. As such they are appropriate, in furtherance of the object of the editor, as specified in the introduction, already mentioned

—i. e. to make this in itself to a considerable degree a work on practical microscopic anatomy. The editor has, however, added some account of Kölliker's discovery of the *third* form of muscular tissue—the fusiform contractile cell—from the British and Foreign Medico-Chirurgical Review for July 1850 ; and Mr. Rainey's account of the sudoriferous glands and ducts, as well as his testimony to the non-existence of epithelium in the air-cells of the human lung.

Quain and Sharpey's assertion that the air-cells are lined by a *mucous membrane*, is in itself altogether improbable, on general grounds ; and nothing but an actual demonstration of the membrane in all its elements could convince us of its existence ; but the existence of an epithelium is less improbable. For in the first place, a true mucous membrane secretes mucus ; and a layer of this secretion upon the inner surface of the air-cells would be a constant impediment to the aëration of the blood—the specific function of the air-cells. Secondly, this impediment is also increased from the thickness of the distinct membrane itself ; still further separating the air in the cells from the blood in the capillaries. Moreover, a *mucous* membrane and its secretion are totally unnecessary in the air-cells. The halitus exhaled from the capillaries directly into the air-cells with the exosmosed carbonic acid gas, is sufficient to keep the inner surface of the air-cells constantly moist—and thus no special secretion is required. Thirdly, according to the generally-received ideas as to the manner in which aëration of the blood takes place, the most favorable anatomical condition would be that in which the least distance, and consequently the least thickness of tissues, intervenes between the air in the cells and the blood in the capillaries ; and this condition is completely fulfilled only when the wall of the capillary projects into, or forms a part of, the parietes themselves, of the air-cell—the wall being also bare, i. e. *not* covered by an epithelium of any kind. Now these are precisely the conditions which actually obtain in birds, in which aëration is most rapidly effected, as Mr. Rainey has demonstrated. And we should not expect to find any essential departure from these conditions in the human lung.

Moreover, we should not expect to find a *conoidal ciliated epithelium* in the human air-cells, though some assert its existence ; for there is no apparent use for the cilia beyond the terminal bronchial divisions, and conoidal cells would occupy an objectionably large space within the cells. The most we could expect to find would be a very thin pavement epithelium like that upon a serous membrane. Even this might perhaps seem to interfere with the aëration-process ; but as it

is well known that the thicker epithelium of the oral cavity rapidly transmits various kinds of fluids through it,* such a thin epithelium would probably afford very little obstruction to the passage of oxygen into the blood-vessels, and of carbonic acid gas in the opposite direction.

The presumption is, therefore, on general grounds, that the human air-cells are *not* lined by a proper mucous membrane, nor by an epithelium, unless it be of the *pavement* kind, and of great delicacy.

Kölliker, however, affords us positive testimony on these points. He says "the epithelium of the air-cells is of the common tessellated [pavement] kind, without cilia," and that it lies on a fibrous membrane—the latter being "the much attenuated mucous membrane and *fibrous tunic* of the bronchiæ.† In other words, the mucous membrane becomes so attenuated on entering the air-cells as to lose both the anatomical and the physiological characteristics of a mucous membrane, and is therefore not a mucous membrane in either sense, though continuous with that of the bronchial tubes. It is also covered by a delicate pavement—epithelium. These points we may now regard as established, and we therefore consider the assertion of Mr. Rainey that no epithelium exists in the human air-cells to be incorrect.

The plates in the second volume are very beautifully colored, and very accurate imitations of the original ones. The American editor has also added 10 new plates, including 47 figures of value, and beautifully executed.

Though we cannot regard the work as being quite *au courant* in all respects as a treatise on Microscopical Anatomy, the editor has much increased its value for all practical purposes; and the plates alone are worth more than the price of the two volumes. We hope the enterprise of the publishers will be liberally remunerated by an extensive sale of the work.

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A lecture introductory to the Course of Surgical Instruction in the Kentucky School of Medicine. By JOSHUA B. FLINT, M. D., Professor of Surgery.

The writer of this lecture is well known as one who wields a vigorous and fearless pen. In this lecture he discourses of what appears to him to be the causes of the separation of medical and surgical prac-

* Dec. No. of MONTHLY, p. 432.

† Microscopic Anatomy, Amer. edition, p. 579.

tice. Disliking the unnatural division, his aim is to aid in bringing back the parts to constitute a more symmetrical whole. He considers the "General Practitioner," like many other good things, an Americanism, and attributes it to our "national good sense." To all of his historical inferences we do not assent, but have been highly pleased with the tone and spirit of the whole lecture. One passage, referring as it does, to the incongruous association of the barbers with surgeons, will be of interest to our readers for its information and as a curiosity.

We have only to consider what an important appendage to the person the beard was considered, in former times—the symbol of wisdom in the sage, of force in the soldier, of piety in the saint, and a favorite subject in the domain of fashion, even to the present day—in order to understand that it was no ignoble art whose services were devoted to the culture and embellishment of so significant, and sometimes sacred a feature, in the human physiognomy. Long before the edict of Tours, the barbers had joined to the use of the razor, a variety of employments, more or less subservient to the health as well as to the appearance of persons. They administered baths, superintended gymnastic exercises, dispensed perfumery, &c., and it is not strange that, when surgery had been degraded into artisanship, this was the class of artists which assumed its exercise.

In a little volume full of medical curiosities, published by William Wadd, an old English surgeon, is the following account of the barber-surgeons, which, as few of you will have an opportunity of access to the book, I copy and read to you, at large :

"Edward the Fourth, in the year 1461, granted the charter of incorporation to barber-surgeons, and the barber and surgeon continued in the same firm for three centuries. The barber was originally introduced into surgery by the priest, who was the chief practitioner of the dark ages. The barber, after shaving the head of the priest, was sometimes employed to shave the head of his patient, and finding these fellows handy with edge tools, they taught them to make salves, dress wounds, and bleed. Such was the origin of barber-surgery. In the fourteenth century, however, the barbers pushed themselves forward so much in the practice of surgery, that in France the legislature interfered ; but the barber's old friend, the priest, putting in a word for them, they were admitted into a newly-formed surgical establishment, under the title of *barber-surgeons* ; and the copartnership between surgery and shaving has existed in France and England till very lately ; nay, till so very near the present time was this foolery continued, that, 'would heart of man e'er think it,' says the philosophical and facetious Abernethy, "even I myself have doffed my cap to barber-surgeons." While this union of the surgeons and barbers continued, surgery retrograded ; in truth, surgery, while united with barbering, might fairly enough have been said to have been *barbarous* ; and a more curious proof of it cannot, perhaps, be given than the fol-

lowing order, which appears in the minute books of the court of assistants, dated July 13, 1587, relative to the disposal of any subject that be daring enough to come to life after being brought to the hall for dissection :

“*Item.* It is agreed that if anybody which shall at any time hereafter happen to be brought to the Hall, for the intent to be wrought upon by the *Thanatomists* (*sic*) of the Company, shall revive or come to life again as of late hath been, the charges about the same body so reviving, shall be borne, seen, levied and sustained by the person or persons who shall happen to bring home the body, and further, they shall abide such order or fine as this house shall award.”

“Another proof might be found in a by-law, by which they levied ten pounds on any person who should dissect a body out of their hall without leave.

“The prudent reign of Henry VII. produced a considerable alteration in the state of England, by the increase of the population, and a consequent increase in the number of subjects. In this reign Lues first made its appearance, and produced the most dreadful ravages. The necessity for Surgeons, therefore, increased, and few there were who confined themselves entirely to that profession. These few were, in fact, ten in number, whose portraits have been handed down to us in one of the finest efforts of Holbein’s pencil, where these ten worthies are represented on their knees before Henry VII., who confirmed the charter of the Surgeons of London. This celebrated painting is now in the possession of the barbers, who gave one hundred and fifty guineas to Barron to engrave it—one hundred in money, and fifty by subscription, for a hundred prints. It was once borrowed by King James I., and his letter on this occasion asserts that the portrait of the king was both like him and well done.

“The co-partnership between barbers and surgeons was not confined to the metropolis, but existed in different parts of the kingdom; and we find a branch of the fraternity at Newcastle, ordering (1742) that ‘no brother should shave on a Sunday,’ and moreover ‘that no one should shave John Robinson till he pays what he owes to John Shafto.’

“It is a curious circumstance, that the act which united the companies separated the professions. It is equally curious, and not less absurd, that though by a special clause it was enacted ‘that no barber shall occupy anything belonging to surgery, drawing of teeth only excepted;’ yet the reason for this union was, that by their assembling together, the science and faculty of surgery should be improved. So that those that did practice surgery were often to meet and assemble with those who did not, ‘*to be improved both in speculation and practice;*’” &c., &c.

Nature in Disease Illustrated in various Discourses and Essays, to which are added miscellaneous writings, chiefly on medical subjects.
By JACOB BIGELOW, M. D., etc., etc. Boston, Ticknor & Fields, 1854, pp. 391, 16mo. *From the publishers.*

This is a very well printed collection from the miscellaneous writings of the author, a gentleman who deservedly stands very high among the profession of his city. As the different papers on medical subjects have at one time and another appeared in medical journals, we are not called upon to examine them critically. The volume is especially valuable to the professional and other friends of the author.



PART III.—PROCEEDINGS OF SOCIETIES.

NEW YORK PATHOLOGICAL SOCIETY.

Nov. 8. *Dr. Cock* exhibited a specimen of cancer of the cerebellum, taken from a colored child two years old. Three children of the family had before died; one with tuberculous meningitis, the others with tuberculous disease of the lungs. The day after the death of a brother, the child was seized with a convulsion, which was not of long continuance. Renewed attacks of convulsions soon ensued, the child becoming sick at the stomach and losing the use of his limbs. His general health failed at the end of two months, and for the last six months of his life he was bed-ridden. His bowels were constipated. On a post-mortem examination of the brain, the lateral ventricles were each found to contain from four to five fluid ounces of serum. The cerebellum was strongly adherent on the right side of the tentorium. On removing it, a portion of the cerebellum remained, attached to the dura mater. There was a softened cerebral mass as large as a hen's egg. Microscopical examination did not definitely settle the character of the tumor. The lungs were studded with miliary tubercles.

Dr. Clark exhibited the œsophagus of a man who died at Bellevue Hospital. He had been there a long time, slowly emaciating. He had difficulty in deglutition, a little food being generally rejected. There was inability to take any solid food for three months, until

within a few days of his death, when a probang being passed down the œsophagus, at the distance of six or seven inches from the mouth, an impediment was felt to give way before the pressure. After this the patient ate more easily until he died. At the post-mortem examination a cheesy mass, resembling cancer, was found attached to the œsophagus below the clavicle. Under the microscope it appeared to be composed chiefly of epithelium. There was another tumor of the same material on the outside of the stomach. The mesenteric glands were somewhat enlarged, whitened and hardened by tubercle.

Dr. Alex. H. Stevens stated the result of his observation to be, that organic stricture of the œsophagus is always malignant; and that the same is true of organic strictures of the colon. He had never known a stricture of the small intestine.

Dr. Buck had seen two cases of stricture of the œsophagus during the past month. Both were in its upper part, and both involved the larynx. They were malignant.

Dr. Schilling had seen a case of stricture of the œsophagus not malignant.

Dr. White had seen a case treated twenty years ago. The patient is still living.

Dr. Isaac Wood's experience confirms *Dr. Stevens'* opinion.

Dr. Clark mentioned a case of great contraction of the stomach, from drinking sulphuric acid. He thinks that stricture of the œsophagus is generally malignant. More than one specimen of malignant stricture of the small intestine had been presented to this society, and Cruvelhier also gives a plate of malignant stricture of the small intestine.

Dr. Edward H. Parker exhibited the brain of a man about sixty years old, which he observed presented some points of unusual interest, though he regretted that the history of the case was not so complete as could have been desired. The man was admitted to one of our charitable institutions early last August, and was then suffering from delirium tremens. The ordinary treatment of the institution consisting chiefly in the use of opium was adopted, and he recovered so far as to recognise his medical attendant, as having had the charge of him previously. His appetite returned, he slept naturally, and was considered as fairly convalescent. Paralysis especially of the lower extremities began to manifest itself, which increased till the urine was discharged involuntarily, and his limbs became entirely inactive. The paralysis increased, till during the last few days of his life he lay in a state of complete insensibility, his breathing being

slow and stertorous. Upon opening the cranium eighteen hours after death, an uncertain quantity of bloody serum escaped. Otherwise, the brain presented the appearances still manifest—the dura mater of the left side is thickened and presents in its substance a bright red spot like a stain, but which by its greater thickness and marked edge, indicates the presence of a coagulum of effused blood. The centre of the clot is about two inches from the median line of the brain and in a position corresponding to the top of the head, when the parts were in their natural position. The size of this spot is a little greater than that of a quarter of a dollar. The dura mater of the right side is similarly thickened, but there is found lying between it and the surface of the brain, a large clot about six inches in length, four in width, and one-half inch in thickness in its middle, where it is the thickest. Its outline is oval. From what vessel the blood came is not clear—only it did not come from those of the brain, as is evident on raising the clot. The firmest coagulation is at a point corresponding to the position of the smaller clot on the other side. In the lateral ventricles there was found a drachm of serum in each, together with small vesicles in the choroid plexus. The substance of the brain appears to be of a natural consistence. On the top of each hemisphere, there are evidences of meningitis, and effusion of lymph to a greater or less degree, over a space as large as the palm of the hand. Dr. P. remarked that the case was interesting, as being a sequent of delirium tremens, and one of the few instances where after this disease there has been evidence of an unusual amount of blood in the head. It was more interesting, however, as a specimen of idiopathic apoplexy, in this position between the dura mater and the surface of the brain—a rare occurrence. The only doubt as to its being from such a cause arose from the possibility of an injury having been received either by a blow or fall. There was, however, no post mortem appearance of any violence, and the whole history of the case showed that there had been none.

The society then passed to the consideration of the special order of the evening, the discussion of the pathology and treatment of cholera.

Dr. Clark stated that the most common manifestation of the cholera poison is a change in the mucous membrane of the alimentary canal, allied to inflammation. These changes which sometimes consist merely of congestion of the membrane, often proceed till the epithelial coat is removed, and ulceration and sloughing take place. They are found at one time in the upper, at another in the lower part of the intestinal canal. His statement was illustrated by the

exhibiting of dried and recent portions of the small intestine taken from cholera subjects. The specimens showed more or less congestion and Peyer's patches were vascular and in some instances ulcerated. Perigoff's plates were also used to illustrate his meaning, and to confirm his opinion. He remarked that the causes of the disease must be looked for back of these conditions. He thought it depended on some change in the nerves, and an influence proceeding probably from the ganglionic system. He thought it might be stated that there is a "substantial external poison" floating in the air and carried by the blood to the ganglionic nervous system, producing changes in the nervous system, which are immediately reflected in the intestinal canal.

Dr. Stevens doubted if there was a poison added to the air.

Dr. Batchelder asked how the absence of all the sequelæ of inflammation could be accounted for if cholera was an inflammatory disease?

Dr. Schilling stated, as the result of about fifty post mortem examinations; that he had seen every sign of inflammation in the lining membrane of the intestinal canal of persons dead of cholera; and in addition to the appearances described, he had frequently noticed white exudations on the serous membranes.

As to the treatment of the disease, *Dr. Hutchison*, of the Brooklyn Cholera Hospital, said that which was most beneficial consisted in the first place of an emetic dose of solution of common salt or mustard, if nausea or vomiting was present. In a majority of cases this would quiet the stomach, so that nutriment and other remedies were well retained. If the stomach was not quieted in this way, no remedies seemed to have any influence in producing this effect, large doses of calomel, effervescing draughts, creosote, powdered ice, lime water and milk, and indeed all other remedies commonly used for this purpose alike failing. Very obstinate vomiting was observed more especially in females, and in those obstinate cases the matter discharged was of a bright green color, very slightly acid to test paper, or quite as often neutral, and no bile indicated by the usual tests.

After the action of the emetic one grain of calomel was given every hour, and continued till twelve or fifteen grains were taken. The rice water discharges would gradually become less frequent and copious, and bile would usually begin to appear after ten or twelve doses of calomel. Beef tea was given *pro re nata*. An epispastic was almost invariably applied over the abdomen, and the hot air bath was in many cases a valuable adjunct. In the early part of the

epidemic, stimulants were freely used, but so small a proportion of those cases recovered in which they were supposed to be indicated, and consequently administered, that they were abandoned. A great variety of remedies were tested, but none were found so satisfactory as those mentioned. Opium and astringents were allowed in a few cases only, by way of experiment. Vomiting and purging, especially when the discharges were of the rice-water nature, were regarded as favorable symptoms; and indeed, whenever a patient was admitted with these symptoms, if the alvine discharges were not involuntary, (no matter how copious) his recovery was predicted with a great deal of certainty. In cases attended with yellowish or light brown discharges, the prognosis was more grave.

In those cases marked by obstinate vomiting, all remedies were withdrawn, even when there was blueness of the surface, its temperature much depressed, and the pulse scarcely perceptible. The patient was allowed to rest quietly twelve or fifteen hours, when the stomach would become quieted so as to retain nourishment and convalescence soon follow. This *let alone* practice was also adopted in some cases of profound collapse, which were considered to be beyond the reach of remedies. This, Dr. H. thinks, is the most valuable experience obtained in the Brooklyn Cholera Hospital.

The mortality in those cases admitted before the stage of complete collapse was reached, amounted to 5.88 per cent.; of those admitted in complete collapse, 82 per cent. terminated fatally; 28 per cent. of this class of cases reacted and died of consecutive diseases, chiefly congestion of the brain, in the early part of the epidemic, and dysentery towards its close. The whole number of cholera cases admitted was 144.

Nov. 22. *Dr. Clark* exhibited four specimens. Of two kidneys affected by Bright's disease; one was in an early stage of the disease, enlarged, weighing seven ounces and a half and fatty; the other small, one half the tubes healthy, and fibrous tissue abounding. The liver in the patient from whom the second was taken, seemed to be atrophied, but on microscopical examination, an excess of fibrous tissue was shown. He thought that this element had probably been in excess in such other specimens of apparent atrophy of the liver as had come under his notice, as in the absence of microscopical examination, simple atrophy could not be presumed.

Dr. Schilling thought that the increased amount of Bright's disease was due in some degree to cholera.

Dr. Clark's third specimen was exhibited for *Dr. Sanger*, but the

record of it is incomplete, and is therefore omitted. The fourth specimen was a portion of intestine from a patient who had had cholera two months before his death. He was discharged from the hospital with slight diarrhœa, which gradually grew worse till he died. The whole colon was the seat of the most intense inflammatory action. There was no healthy portion of the intestine from the anus to the ileo-cæcal valve, and the inflammation had also extended several feet along the small intestine. There were small ulcerations, and the mucous membrane was injected. In the small intestine there was a complete covering of diphtheritic exudation.

Dr. Isaacs exhibited two specimens, of one of which we have no description. The other was a specimen of fracture of the cartilages of the seventh and eighth ribs, one of them united by bone ; the lacunæ and tubuli of bone being seen under the microscope.

Dr. Bauer exhibited a specimen of fatty liver from an intemperate patient. The liver was much enlarged, and the kidneys were affected with Bright's disease. The spleen was of one half of the normal size.

Dr. Dalton performed some experiments, showing the peculiar manner in which gastric juice, when present in a saccharine fluid, modifies the action of Trommer's test for grape sugar. When grape sugar or honey is dissolved in water, the addition of a drop or two of a solution of sulphate of copper, followed by an excess of liquor potassæ, produces a transparent blue solution, which on boiling becomes yellow and opaque, from the deposit of an abundance of the insoluble suboxide of copper. If the honey, however, be dissolved in gastric juice, the addition of sulphate of copper and caustic potash produces a solution of a purple color, instead of a blue, which in boiling changes to yellow, but at the same time remains perfectly clear, the suboxide of copper being apparently produced as usual, but being retained in solution instead of being deposited as a precipitate. Gastric juice has this effect though the honey be present in very large proportion. A mixture of the two in equal volumes, for example, does not precipitate the copper when tried immediately with Trommer's test ; but if it be diluted before-hand with water, the yellow suboxide is deposited as in ordinary fluid. Though the copper is not usually precipitated by Trommer's test from gastric juice containing grape sugar, yet the change of color from purple to yellow, which takes place in boiling, is an equally good indication of sugar, when it is present in large or moderate quantity ; but when present in minute quantity, say one-sixteenth of a drop of honey to the drachm of gas-

tric juice, the purple color does not change in boiling, and the test is entirely interfered with.

Dr. Conant remarked, in continuation of the discussion on cholera, that the Mott street Hospital, of which he had charge, assisted by Drs. Stiles and O'Reilly, was opened on the 22d of July, and received the first patient on the morning of the 25th. There were in all, received into the Hospital, 329 patients, of whom 154 died, and 175 were discharged entirely free from cholera. During the epidemic Dr. C. made 104 post-mortem examinations, and found the appearances so similar in all, that he thinks they may be looked for with as much confidence as the pathological appearances in phthisis pulmonalis. What the choleraic influence is, he does not pretend to say, whether it be the cholera fly, bug, miasma, or contagion. He has seen no evidence of contagion, but is satisfied that the poison is engendered and perpetuated in proportion to the amount of material it has to work upon, in certain districts and localities. The diarrhœa, which patients are frequently troubled with two or three days previous to an attack of cholera, he thinks, is not produced by choleraic poison, but that it is rather accidental, to which all are more or less liable during the months in which cholera usually prevails.

He believes all are under the choleraic influence, but that it requires some depressing agent to bring the vital powers within its control, that this may be diarrhœa, fear or any other influence that acts directly to exhaust the nerve force. Hence, in many cases we need not have the diarrhœa at all, only so far as to empty the intestines of the bilious matter they contain at the time of attack. Dr. C. believes the choleraic poison acts directly upon the ganglionic system of nerves; that the functions of the sympathetic are paralyzed and for the time almost destroyed, so that no organ depending upon this system performs its functions regularly, and those most dependent, as the stomach and duodenum, least of all. The capillaries are deprived of their irritability and allowed to dilate; the fluids of the blood are thrown into the stomach and duodenum in fearful quantities, by a new process of transudation; as the stomach becomes full, it empties itself by the act of vomiting, &c. The watery portions of the blood are thrown out, the blood becomes thickened, the kidneys cease to act, perhaps for the want of serum to wash out the uriniferous tubes. The capillaries in the extremities are obstructed by the thick blood, reflex action manifests itself, and the muscles contract to assist the capillary circulation of the part. The general tendency of

the blood is towards the stomach and duodenum, hence the collapsed state of the cutaneous capillaries.

Post-mortem examinations were generally made a few hours after death.

External appearances. Face contracted, eyes sunken, pupils slightly dilated, skin blue, especially the hands, face, and scrotum of the male.

Thorax. Pleura pulmonalis, found covered with a peculiar slimy substance, as though deposited by the absorption of fluids natural to the parts.

Hypostatic congestion usually well marked. Pericardium slightly moistened, upon the apex of the heart and upon the anterior portion of the lung, small patches of ecchymosis in some cases.

Abdomen. Peritoneum usually congested, except that portion covering the stomach and duodenum, where it was usually pale, always quite dry.

Spleen and pancreas generally quite natural.

Kidneys appear as if injected by mechanical force. Mucous membrane of the stomach has a peculiar par-boiled appearance, is quite soft and rolled up into large rugæ, as if by contraction of the muscular coat, with patches of congestion in most cases, but never having the appearance of inflammation. Mucous membrane of the œsophagus light-colored, extending half an inch into the stomach, where the line of demarcation was quite distinct. The pyloric orifice of the stomach usually almost closed by the large fold of mucous membrane. The valvular conniventes of the duodenum quite large. The mucous membrane of the jejunum slightly congested, with an increase of congestion at the ilio-cæcal valve; the mucous membrane of the colon, usually having no appearance of disease. The whole alimentary canal generally somewhat contracted.

The liver is of normal size and full of black blood, often presenting light spots on various parts. Gall bladder is filled with dark bile, except in two cases, when it was filled with a watery substance resembling bile only in taste. The urinary bladder is contracted to the size of a hen's egg.

Brain. The veins of the dura mater and arachnoid are found much distended with blood, with large quantities of serum in and around the brain. The cerebral arachnoid seemed in some cases to be œdematous, presenting a peculiar light, opaque appearance. The vessels around the medulla oblongata filled with blood more red than in other parts of the brain. Upon dissecting the brain, the substance

seemed to contain more blood than usual. No other pathological condition was found until he came to the pituitary body. Invariably this was found more or less hardened ; in some cases so hard as to be with difficulty crushed between the thumb and finger. Now if the position be proved, that the pituitary body is the centre of all sympathetic action, Dr. C. thinks cholera is proved to be a disease of the sympathetic system, and *vice versa*.

Solly and some others are inclined to take this view of the function of the pituitary body. No pathological state was found of the abdominal sympathetic system.

Dr. C.'s treatment was the following :

If the patient was brought in before the bowels were entirely free from bilious matter, acetate of lead 3 grs. and opium 1 gr. was given every hour or two as the case might be. If this failed, or the patient was passing by stool, or vomiting rice-water when admitted, 3 grs. opium, 2 grs. acetate of lead, were given as the case demanded. External applications of mustard, and hot drinks were always used. With this treatment reaction was mild, and recovery was predicted with confidence, unless the patient had passed the stage of vomiting and purging. After this stage, calomel and rhubarb each grs. v. every three hours were given, with external appliances when required ; then the hot drinks were particularly grateful, and Dr. C. has never heard a patient complain of the drinks being too hot, except when given luke warm, and after taking hot drinks they seldom called for cold. Beef tea and brandy were given by the mouth ; but believing the mucous membrane of the stomach and duodenum were in a condition to throw out rather than to absorb, Dr. C. was in the habit of giving tonics and stimulants by injection, and in this way found they acted more powerfully. In cases where larger doses of laudanum seemed to produce no effect, one half the quantity by injection would apparently have its full effect, in a few minutes producing contraction of the pupil, &c.

If the patient was admitted, moribund very little medication was resorted to. A careful inquiry was instituted in all cases, and it was found that more were attacked in the morning from one to three o'clock, and by looking over the deaths it will be found that more died from two to ten, P. M., than at any other hour. Dr. C. thinks that one week he was considerably under the choleraic influence himself, being waked about two o'clock every morning, for five in succession, by a peculiar sick feeling, which was averted by a dose of his own medicine.

(The tables of nativities and ages were added by Dr. Conant, for which see the Nov. No. of the MONTHLY. ED.)

Dr. Hutchison remarked that there was one remarkable post-mortem phenomenon peculiar to cholera, to which allusion had not been made, although it had been frequently observed ; viz, the rise of animal heat in the body after death. He had in one case observed the temperature of the pelvic cavity one hundred and four degrees, three hours after death, whilst the temperature of the atmosphere was eighty-three degrees. In another case the temperature of the axilla was one hundred and four degrees, one hour after death, when the temperature of the atmosphere was eighty-seven degrees ; and six hours after death, the pelvic cavity of the same subject gave a temperature of one hundred and seven degrees, atmosphere, eighty degrees. Dr. H. also mentioned another case, observed fourteen and a-half hours before death, in which the temperature of the mouth was seventy-eight degrees, axilla ninety-two degrees, side of the abdomen forty-nine degrees, calf of the leg eighty-seven degrees, vulva forty-nine degrees ; and four and a half hours after death the side of the chest gave a temperature of ninety-four degrees, atmosphere eighty-five degrees. Dr. Hutchison remarked that this phenomenon was not a novelty, it had often been noticed, but it was now brought up with the hope, if any gentleman present had investigated the cause, he would be able to offer us a rational explanation. Dr. H. stated he had frequently observed the blanched appearance of the external surface of the stomach and bowels of patients who had died of cholera, to which attention was directed at the last meeting by Dr. Clark in the plates of M. Perigoff. He had noticed the inflammatory appearance of the intestinal mucous membrane, but had ascribed it simply to a venous stasis of the blood, because the inflammatory effusions and other sequelæ of inflammation were absent, and in many cases also this injected condition of the capillaries was wanting. Dr. H. also, referred to an experiment made by Magendie, which consisted in the injection of an aqueous fluid into the intestinal arteries of cholera subjects, whose intestinal mucous membranes presented the reddened appearance alluded to, with the effect of bringing away the blood and leaving the intestine clear and white, which he thinks could not have been the case if the organic changes always resulting from inflammation had taken place.

NEW YORK ACADEMY OF MEDICINE.

The December meeting of this body was held on Wednesday, the 6th, at the usual hour. After the reading and correction of the minutes, reports of committees being called for, Dr. J. H. Griscom read a report from the committee to whom was referred the consideration of the new preparation of solidified milk. It contained nothing of practical value beyond what has already been said of the preparation, in the second volume of the MONTHLY.

A still farther report was made by Dr. Batchelder on the division of the Academy into sections, and the project will probably be adopted.

An obituary notice of Dr. Isaac Greene, a deceased member of the society, was read by the secretary.

The president exhibited a cup made of the wood of the *Quassia Amara*, manufactured in Jamaica, and of common use in that country when persons drink infusions of that substance. It did not appear that any especial advantages attended it.

After the announcement of certain committees of no general interest, a paper was read by Dr. A. K. Gardner on uterine hæmorrhage. On account of its length, the author appeared to omit some portions of it, which no doubt injured its completeness.

A paper was then read by Dr. Horace Green "on the employment of injections into the bronchial tubes, and into tubercular cavities of the lungs."

It is a very proper by-law of the society, that no paper shall be published *as read before them*, without especial permission. We have, however, the pleasure of laying the paper before our readers in this number of the MONTHLY.

On motion of Dr. Willard Parker, a committee was appointed to report upon this paper. Dr. P. is, in accordance with the parliamentary rule, chairman of the committee. Nominations for officers for the ensuing year were made, the election occurring at the January meeting. The society then adjourned. It is a matter of regret that, in some particulars, there is evident in this body a narrow and illiberal spirit. Its manifestations may, at some future day, afford a chapter for the enlightenment of the profession at large in the medical polemics of New York. Meantime it may be remarked, that it would be a kindness if some of the friends of the gentleman who signs himself "L'Ancien Secrétaire," would instruct him in those things which pertain to the ordinary civilities of life.

PART IV.—CHRONICLE OF MEDICAL PROGRESS.

Bilateral Operation in the Female for Calculus. By DAVID W. YANDELL, M. D., of Nashville, Tenn.

Sarah W., of Christian county, Ky., æt. 13 years, the subject of stone since early infancy, her mother thinks from birth, applied to me in July last for relief. I wished to defer an operation until the pleasant days of autumn, and so contented myself by suggesting to the girl's physician, Dr. Thomas, of Hopkinsville, the usual palliative and invigorating treatment.

Early in August, Dr. Thomas advised me that the sufferings of the patient were so severe, and her general health declining so rapidly, that he deemed an immediate removal of the stone necessary.

On the 24th of August, when I first visited Sarah, she was very thin, pale and feeble, considerably exhausted by frequent paroxysms of severe vesical pain, and the subject of constant fever. Her physical development, generally defective, was especially so in the genital organs. The external portion of the vaginal canal was very contracted—the hymen almost imperforate.

The next day, with a pulse of 120 beats to the minute, the patient was secured for the operation. Chloroform was administered, the bladder explored, and a stone of large volume at once detected. I adopted the operative procedure conceived and first executed by Prof. Eve, of the Nashville University, in 1852. The incisions were freely made, dilatation was effected by the finger, and the forceps introduced, and attempts made at extraction. These failed because of the size of the calculus. I withdrew the forceps, re-introduced the lithotome, and enlarged the wound. Efforts for removal were again unsuccessful. I now endeavored to crush the stone—the force employed bent the smaller sized lithotomy forceps. These were laid aside, and with a larger instrument I succeeded in breaking the stone into two large and a number of smaller fragments.

As the operation now promised to be very tedious, the patient was allowed to recover her consciousness. The work was proceeded with—fragment after fragment, numbering in all nearly one hundred, and well nigh two tea spoonfuls of sandy particles were extracted. The bladder was thoroughly cleansed, the patient unbandaged, placed in bed, and a full opiate given. In five hours after the operation she urinated at will, with almost entire control over the sphincter. On

Saturday, being obliged to return home, I left her in charge of my friend, Dr. Thomas, who, under date of September 7th, writes as follows—"Just eight days after the operation, Sarah was up walking about the house and yard; two days later she rode a short distance behind her mother on horseback, against orders of course. Her general health is rapidly improving. She has entire control of the sphincters throughout the day. At night, when asleep, her old habit returns, though in a gradually diminished degree—so much so, indeed, that I am confident it will soon disappear altogether."

Owing to being obliged to crush the stone before extraction, I am unable to make any very accurate statement as to its size. To my finger, when introduced into the bladder while the calculus was entire, it appeared of the volume of a hen's egg, and on putting the fragments after removal in juxtaposition with each other, this was the opinion of the other medical gentlemen present.

I placed the stone in the hands of Dr. Haskins, of Clarksville, Tenn., for analysis, who has kindly furnished the annexed result, which, however, it is proper to remark, contains only the *prominent* constituent of each layer:

Nucleus—Uric acid salts.

2d layer—Oxalate of lime.

3d layer—Phosphate of lime. Triple phosphate of magnesia and ammonia.

4th and outer layer—Oxalate of lime.

[*Nashville Journal of Med. and Surg.*

Therapeutics.

Gutta Serena.—M. ELLEFSEN recommends a solution of this substance in swelled testicle and fresh wounds, on account of its adhesiveness and making an air-tight covering. He dissolves the gutta serena in bisulphuret of carbon, and spreads the substance over the part affected. It immediately becomes dry and stiff, and forms a thin, tight, and adhesive covering, which loosens at the edges after three or four days, when it must be repeated.

Chronic Papular Eruptions.—Dr. BURGESS considers them to consist of disorders of the cutaneous nerves, and prescribes, in severe cases of prurigo, strychnia and phosphorus; he has found phosphorated ether, proceeded by repeated doses of hyosciamus for a day or two, succeed in allaying obstinate prurities, given internally.

Turpentine Bath.—Dr. MOREAU speaks highly of a bath in turpentine vapor, in catarrhal affections, rheumatism and severe neuralgias. The patient is shut in a room into which the vapor is introduced from without—varying in temperature from 45 to 102 degrees. It produces copious perspiration, which greatly diminishes the temperature of the body.

Collodion in Orchitis.—Prof. COSTES relates cases of this disease in which, after covering the scrotum with a mixture of 20 parts of collodion and 6 of ol. ricini, the swelling and pain were quickly relieved, and a rapid and complete cure was obtained.

Acne.—GAZENAVE has recently recommended ammoniacal lotions, which form with the fatty matter of the follicles a soluble soap with an ammoniacal base; the hydrochlorate or acetate of ammonia answers equally well.

Creosote in Intermittent Fever.—ZWETKOFF was induced to make a trial of creosote in intermittent fever, (1) On account of its specific influence over the abdominal ganglia of nerves, especially the solar plexus, and (2) On account of its good effects in periodical vomiting. He gave it in doses of from 9 to 15 drops, three times per day in mucilage.—*N. Y. Journal of Medicine.*

Two Interesting Cases. By J. C. NOTT, M. D., of Mobile.

Protrusion and Sloughing of Entire Rectum.—In April last, I was requested by Mr. T., a well known merchant of Mobile, to see his child, a daughter, then about fourteen months old. She had been fretful, and her mother discovered that a small quantity of blood had passed both from rectum and vagina. The child, a few days before, had swallowed and thrown up some fragments of brown straw, and it was surmised that a piece might have passed down into the rectum, and protruded through into the vagina; but no straw was seen in these parts. I directed a dose of oil, flax seed tea injections into rectum and vagina, and quiet. In a few days all seemed well again, and nothing occurred during the summer to attract attention.

About the 20th September, the child became uneasy, and passed a little blood again, and on the 22d, I was sent for in haste to see it, but being absent from my office, Dr. Inerarity was requested to call, and found about six inches of intestine protruding from the anus, with the lower end free and unattached. Seeing no immediate indication, he proposed not to interfere before my arrival, as I was the

family physician. I saw the child with him a few hours after, and found, as above stated, the bowel protruding. On examination, it seemed that there had been an abscess and ulceration around the *sphincter ani*, that the perineum had given way, thus throwing the rectum and vagina together, and that the large intestine, cut loose from its lower attachments, had passed entirely out to the extent of six inches. The child was in pain, cried violently, and made all possible resistance during the examination, and, in fact, prevented us from making as full and fair an examination as we wished.

The most important question, however, was, what could be done to remedy the difficulty? It was clear that no good could be expected from stuffing the intestine back into the pelvis; it would certainly be expelled immediately, and our examination even was terminated as quick as possible, as the straining effort of the child, while screaming, had a tendency to force down mere bowel.

The case was therefore left to nature; the stools passed through the protruded portion every day, and on the fourth day, the bowel being completely sphacelated, I clipped it off close to the anus with a pair of scissors. Since that time, the general health of the child has been pretty good. It had a teething diarrhoea previous to the accident, and has had from two to half a dozen operations during the twenty-four hours ever since. The operations are soft, but sometimes pretty firm and well digested.

I visited the child this morning (3d of November), six weeks after the accident, and on examination find the parts apparently healed. The lacerated perineum remains and the loose bowels, but otherwise the child seems well. Owing to the determined opposition of the child, it is impossible to make a perfectly satisfactory examination of the parts, but there is good reason to believe that the bowel has formed adhesions near the anus, and that there has been created what an Irishman would call a *natural artificial anus*!

I have not taken the trouble to look over authorities, but remember no similar case on record. On my visit to day, I find that a homœopathic doctor has been called in to the case, and I retire. He has attacked the baby fore and aft with infinitesimals, and I sincerely hope may perform a fundamental miracle.

Case of Acute Phlebitis Simulating Yellow Fever.—This case has raised in my mind a new and curious point in the pathology of yellow fever, which may be worthy of investigation.

The subject was a son of Mr. L. Kirkbride, about nine years old.

In March last, he returned from school limping with a severe pain in his groin. I was asked to see him, and found a little swelling, and much tenderness at the point complained of. His mother attributed his complaint to his riding on the rail of the stairs in her house, an amusement which he had been indulging in for several days.

The next morning, I found that he had been suffering very much with his limb all night, was still suffering, and had high fever, with very quick and small pulse. In the course of the day, the fever increased; he became delirious, and remained so all night. The third day he had convulsions, and all the constitutional symptoms became much aggravated. He was quite insensible all this day and night, and on the fourth his stomach became irritable; he first vomited simply his drinks, and finally black vomit in profusion. His skin became yellow, and he died in the course of the night, and the corpse presented all the ordinary appearances of a case of yellow fever. There was no swelling of the leg, as we generally see in cases of phlebitis, except some puffiness about the groin and upper part of the thigh.

Being rather at fault in my diagnosis, I requested and was permitted to make a post mortem examination.

Autopsy.—The abdominal viscera afforded nothing worthy of remark, except the liver, and this presented the dry, gingerbread appearance described by Louis as characteristic of yellow fever.

On cutting into the groin, the original seat of complaint, I found nothing but a little serous infiltration until I came to the femoral vein. On opening this, I discovered unequivocal marks of acute inflammation, and it was completely blocked up by firm coagulum from the groin to the ham, as far as I traced it.

Now the question is, do the veins play any important part in the pathology of yellow fever? The condition of the liver, and the black vomit, in this case may suggest the propriety of investigation in a new direction.—*New Orleans Med. News and Hosp. Gazette.*

Startling Abuses in the Retail Drug Trade—The Remedy.

There is no business whatever in which the public ought to feel more interest, and to which they pay less attention, than the retail drug trade. If a man wants a dose of medicine, he thinks it sufficient if

he get it out of some store with a projecting window with a big red and blue bottle in it. It never occurs to him to consider whether the druggist is acquainted with his business, and a judge of the quality of the medicine which he dispenses.

To qualify a man to keep a drug store, a thorough knowledge of Latin is requisite. He should know at least the rudiments of the Greek language, and be practically acquainted with Chemistry and Botany. He should have such an accurate acquaintance with medicine as to be able, at a glance, to detect impure and spurious drugs. How few of all those in the business are so qualified?

Too often, the drug business affords a refuge to those who have failed in other businesses. Men who "burst up" in dry goods have succeeded in drugs, and got rich on their little quackeries and nostrums. All these gentlemen stick M. D. to their names, and will "undertake" anything, from the manufacture of "refined liquorice" to the "embalming of the dead," whom they will warrant to keep until the general resurrection.

These pretenders foist off molasses and water as a blood-purifier, under the name of sarsaparilla. They are the sole inventors of some wonderful remedy for coughs and colds. Their cholera and colic mixture is quite infallible, while their venereal remedies, which they, delicately, style "vegetable elixirs," were never known to fail in effecting a speedy cure.

Many of these empirics have stores in the meaner districts of the city, and it is astonishing what sums they receive for their "advice" from the poor. They lie in wait for thoughtless sailors, and reckless California passengers, and "screw out" of them large sums for medicines to protect them from the diseases and influences of any climate!

A great many drug-stores belong to physicians; but as it is considered *infra dig.* to be connected with a store, they usually carry on the "shop" under another name. In such cases they avail themselves of the services of some unfortunate foreigner, whose necessities compel him to accept of from \$3 to \$5 a week, the usual pay of drug-store clerks for seventeen hours' attendance daily for six days in the week, and nineteen hours on Saturday.

There is more ignorance or rascality displayed in the drug trade than in any other. The quantity of spurious drugs which is introduced daily into New York is immense. Besides, the adulterating of drugs is carried on as a regular business in this city. It is only a short time ago since an advertisement appeared in one of our contemporaries for upwards of a week "for a person acquainted with the

adulteration of drugs." No doubt the advertiser had, to use a business phrase, "a host of applicants." The sale of these adulterated drugs proves one of two things: First, that the retail druggists, being ignorant of their business, buy these drugs as genuine of the wholesale houses; or that, being acquainted with their business, they buy them for the sake of the extra profit which such drugs will fetch. It is not uncommon for even "respectable" druggists to "palm off," at sixpence an ounce, common senna, which costs fifteen cents a pound, for Alexandria, which costs from seven to nine cents a pound extra. Three hundred per cent. profit would satisfy most traders, but the druggists go in for from four to five hundred per cent., and as much more as they can get, but inasmuch as much of their stock is perishable, and they are obliged to keep a large assortment for which there is very little call, this per centage is not as unfair as may at first seem.

From what we have said, some might suppose that the adulteration and imitation of drugs were confined exclusively to the wholesale trade. But such is not the case. Labels for French perfumery and for various patent medicines are to be had in all the wholesale stores, and are bought and used extensively by almost every retail store in the city.

Quack medicines, for the sake of the one hundred per cent. profit which they yield, are sold by every retail store in the city; while the most simple analysis or synthesis would show that they are not only deleterious but positively poisonous.

One, who was a farm laborer, then a horse-jockey, and now is self-styled an M. D., who has a store and manufactory a few miles from town, and a "desk" in an office in the city, informed us some time ago of the ingredients of one of his nostrums, which is regularly advertised as "one of the blessings of the age," and asked our opinion of it. On our expressing our surprise at his daring to sell such stuff, he admitted that the "blessing was a leetle strong," and that on being *dared* to drink a twenty-five cent bottle of it, he nearly killed himself, although he vomited the whole in half an hour after taking it.

As the imitation and adulteration of drugs is not confined to the wholesale houses, neither are all the other rascalities in the business to be laid at their doors.

Our readers cannot fail to have noticed the great number of drug-stores which are daily advertised for sale in all parts of the city. The preparing and stocking of these stores for sale is carried on as a

regular business. An old mechanic or bankrupt dry goods man has sometimes two stores "doing an excellent family business, in most desirable localities," for sale. Before the stores are advertised, a complete supply of tinctures is made up—and such tinctures! The directions of all the dispensaries are set at nought. The tinctures (!) are made up without regard to quality. Cheapness and profit are the only objects in view. A complete stock of the best imitation of genuine medicines is laid in, fictitious transactions are entered in the "Daily Cash Book," and the daily sales are increased by a convenient medical process. And now the store is ready for sale.

The ignorance of those in the drug business, and the negligence and carelessness of physicians, lead to innumerable mistakes, many of which prove fatal.

The United States, London, Edinburgh, and Dublin, publish each a *Dispensatory* or *Pharmacopæia*, for the guidance of apothecaries and physicians. Many of the names for the same drug are entirely different in each of these works. It might be supposed that our medical men would confine themselves in writing their prescriptions to the nomenclature of that very able work, the *United States Dispensatory*.

Such, however, is not the case. It would be difficult to say where many of them picked up their Latinity. It would astonish the men of a much later period than that of CÆSAR or CICERO.

We have recently had access to upwards of two thousand prescriptions. About fifteen hundred of them showed that the writers were entirely ignorant of the declensions to which the various nouns used belonged. Many of them were written in pencil, and almost illegible. If a medical man be applied to in bed for a prescription, he may be excused for using a pencil, but in no other situation. Before a prescription reaches an apothecary it is, not uncommonly, well creased and thumbled, and, if in pencil, next to illegible. No patient who is able to pay his physician should accept from him a prescription in pencil, or one which is indistinctly written. Such lead only to mistakes.

When an erroneous prescription is presented at a drug store, the prescription, if the druggist be ignorant of his business, is made up exactly as it is written. If the druggist knows the nature and quality of medicines, the prescription should be sent to the physician to be corrected. But as no professional man likes to be convicted of an error, it is very seldom that he hears of his own mistakes. A conscientious apothecary informed us that when he first commenced business, he made a practice of sending all erroneous prescriptions back,

but as he invariably lost the custom of the medical men to whom these were sent, he changed his system and corrected the mistakes himself.

We are informed of a fatal mistake which occurred a few weeks ago. A prescription in which a most unusual quantity of prussic acid, with three or four other ingredients, was ordered and left at a drug store. The clerk of the store hesitated to put up the prescription in the absence of his employer, and, unwilling to lose a little custom, stated that it was necessary to send down town for one of the ingredients, and that the medicine would be ready in an hour or two. The patient was anxious for the medicine, and sent twice for it. He soon called a third time, and stated that if it was not ready, to give him the prescription, and his father would get the medicine elsewhere. The prescription was returned and made up by some one more ignorant or less scrupulous, and next day the lady was dead of a diseased heart! Diseased hearts cover a multitude of mistakes!

It frequently happens that some drug is ordered which is not in the store of the apothecary to whom the prescription is presented. In such a case, if he be an unscrupulous person, he substitutes some drug of what he considers a similar quality for the one in question. A case of this kind occurred some time ago in the practice of an acquaintance. He was attending an engineer of a Southern steamer, who was suffering severely from fever and ague. After giving very powerful doses of quinine, the physician ordered podophyllin. The prescription was taken to a drug store in the vicinity of the wharf at which the steamer was lying, and the proprietor having no such medicine, supplied jalap in its stead. Next morning the patient was raving mad, and had to be transferred to the City Hospital, and lost his berth on board of the steamer. When the physician called next day at the drug store to examine the podophyllin, he was so astonished at its effects, he was informed by the apothecary that his clerk had not much experience, and had used the one medicine for the other!

Numerous mistakes occur in stores which frequently change owners. Drugs, in such stores, are put into jars, bottles, and drawers, with names applicable to other medicines. This, too, is frequently done, as some unprincipled druggists say, to test the ability and knowledge of their clerks. It is nothing uncommon to see a whole "nest of drawers" without a single label on them.

A narrow escape from culpable carelessness of this kind occurred in a well-frequented drug store which recently changed proprietors. The

clerk's account of the mistake was that, when busy in making up a long *minim* prescription, a girl entered the store crying, and asked for three cents' worth of a medicine very little used. A jar, on which were a gilt and a paper label—the latter intending to intimate that it bore the name of the medicine it then contained, which was that asked for—was hurriedly taken down for the first time that the clerk had been in the store, and the girl was served out of "her turn." Most providentially, the physician was waiting beside his patient, a child, to administer the medicine, when he discovered that a drug had been sent which would have destroyed life, with great agonies, in a few minutes. So much for false labels !

If medical men were aware of the absolute trash which is sold for medicine, they would be careful in recommending particular stores. While many physicians accept of 25 per cent. on the amount of business which they send to the stores of their friends, such recommendations will be viewed with suspicion. They should abandon a percentage which, to say the least of it, is deserving of reprehension.

What then, you ask, is the remedy for this state of things? We answer—first, in so far as the public is concerned. Avoid all stores in which there is a continual change of clerks, and especially if you should be satisfied that they are not receiving more than \$5 a week. No competent person, except in extreme distress, would accept of such a sum. Avoid all dirty stores ; all stores, which, from a patch-work like appearance—jars of various sizes and of different patterns, with dissimilar labels—give evidence that they have changed hands repeatedly ; all stores where everything is not carefully labelled ; and where there is a total absence of anything like system. If you see one set of tinctures on one side of a store, and another set opposite ; oils divided in the same manner ; spirits, essences, and syrups ranged together, and roots, flowers and seeds jumbled together, and other things in similar confusion ;—though you know nothing of medicine, you may be assured that there is neither method nor system in such a store.

Secondly, in so far as the trade is concerned. There are a *few* well educated and thoroughly bred druggists in the city. Let them unite and appoint, for their examination, the very best professors they can obtain in Latin, Chemistry, Botany, and *Materia Medica*. Let these druggists submit to a searching examination, and obtain a diploma of their qualifications. Such diplomas, by giving the public confidence in their abilities, will increase their business, and leave their uneducated brethren to the neglect they merit.

There is another plan which might be adopted by the public for its safety and satisfaction, but to it we cannot allude in this article.—*New York Daily Times.*

PART V.—HOSPITAL RECORDS.

WARD'S ISLAND.—The influence of the general depression among the laboring classes, caused by the monetary crisis at present pending, has manifested itself in the greater proportionate influx of applicants for admission to the Hospital and Refuge departments of this Institution, and the great severity of the season, as far as it has gone, will no doubt tend to increase this still more. It is fortunate, indeed, for the poor that so much succour is at hand in the hour of need as that provided by this and kindred establishments. The wisdom of their provision and the method of their management reflect great credit on the government, and speak well for the philanthropy of the people.

Twins; arrest of development in one fetus. Dr. Cox exhibited a very interesting preparation to the visiting pupils, illustrating the arrest of development in one foetus in a case of twins. There was one placenta and two sets of membranes. The woman aborted at eight months; one child had attained the usual size and appearance of development at that age; the other seemed as if this process had been cut short at about five weeks. This phenomenon appeared to, and doubtlessly did, depend upon the tight wrapping of the umbilical cord around the neck, and the pressure exerted upon it by malposition of the head and trunk. One curious feature in the case was the appearance presented by the half of the placenta to which this undeveloped foetus was attached; it presented a shrivelled and hardened appearance, similar that seen in the foetus, as if both had been macerated in spirit. At first sight this might have been taken for a case of superfœtation, but the existence of a solitary placenta would preclude this idea.

Dr. Cox also exhibited the larynx and trachea of a child a few weeks old, exhibiting the membranous exudation in acute laryngo-tracheitis.

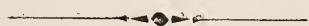
Surgical wards. Two mistakes occur in the last number of the MONTHLY under this heading. I omitted to mention that the case in

which Chopart's operation was performed was one of severe railroad accident, crushing the foot, and followed by sphacelus of the phalanges. Again, in detailing the operation for stricture of the rectum, the words "armed with a fine silver wire" are omitted after the words "a needle contrived for the purpose." As it was printed, there is no sense in the passage. For "cerneau" also read "serrenœud."

Apropos of this case; the wire ligature has come away and the patient is doing remarkably well, with every prospect of an effectual cure. The case in which Syme's operation was performed is also progressing favorably, promising a useful heel, composed of the original tissues, which will sustain the weight of the body most efficiently.

Chopart's and Flap operation below the knee. These were secondary operations, rendered necessary in consequence of previous unsuccessful amputations, the bones projecting in each, and preventing cicatrization of the stumps. One came from the city, the other from the country. In the latter case Dr. Carnochan made his upper incision somewhat more curvilinear than usual, dissecting back the integument, so as to form an anterior flap, and thus securing abundance of covering, the posterior flap being somewhat stinted by reason of the previous amputation.

There is a case of very large fungus hæmatodes of the knee in a young man, from whom it is proposed to remove the limb by amputation.



PART VI.—EDITORIAL AND MISCELLANEOUS.

VOLUME THREE.—Our subscribers will notice several changes in the MONTHLY, all of which, it is believed, are for the good of the publication. They have not been made without considerable expense, and an earnest desire to make the externals correspond with the high character which it is our intention that the contents shall deserve. From the determination to place the MONTHLY on the basis of its own merits for the first year, comparatively little of the usual means of introducing such publications have been resorted to; but now that its principles are well known, and its reputation established, we shall more freely solicit subscriptions. The terms, too, it will be noticed, continue to be only *three dollars* a year *in advance*, although the rise in the cost of materials and labor during the past year is such as to

justify an increase of the price. So many difficulties have been met with in prepaying postage that we are compelled to expect, that to be done by subscribers, who will observe that, by paying in advance at their offices, the cost is only six cents a quarter.

We shall still endeavor to make compensation for original articles, when authors feel that they cannot afford to make gratuitous contributions to the progress of their science ; but in all cases the expectation of compensation must be mentioned when the article is offered for publication. In this way only can we be secure from the mortification of tendering money to those who reply that they "write for other rewards," and of sometimes appearing niggardly when we only fear lest we should offend. The past year's experience has made us desire to avoid both mistakes for the future.

It is a matter of regret that in consequence of some changes in the firm of our last publishers, from ill health of one of the partners, we must again change the name upon the title page. These changes, it may be worth while to say, do not at all affect the stability of the enterprise, that being entirely independent of them.

With this perhaps too lengthy explanation of our personal matters, we respectfully solicit from our readers their efforts to extend our circulation by securing new subscribers.

PROFESSORS AND STUDENTS.—It is sometimes considered a practice inconsistent with the dignity of a professional periodical to make quotations from a newspaper, as if the robes of the profession would be soiled by such plebeian contact. We have not so looked at the matter, and have no sympathy with that weakmindedness which upholds it. "*Je prends le bien où je le trouve*," is a motto indicative on the title of one of our contemporaries of a much wiser spirit. We have elsewhere in this number given our readers a paper from the New York Daily Times, and now insert another quotation from the same paper. The subject of it is one abundantly deserving notice, not for its especial cause, but for the general principle which it involves. Professional instructors owe other duties to their pupils besides that of storing their minds with knowledge, and the best mode of performing them is often a serious question. Coming as the following suggestions do from an *outsider*, they ought to have weight, especially as they appear to be made by one who knows the position and the dangers of medical students. In this view of the case, it

seems to be pretty evident that even if a Professor is himself in the habit of using liquors, whether moderately or not, he is not justified in placing his students in circumstances of especial danger, though they may arise from influences beyond his control. We may add that the article from which this extract is made was written with especial reference to the New Year's Day festival, and we copy it not only because we wish the principle might be adopted on that day, but on all other occasions in which teachers entertain students.

“There are three Medical Schools in the city. In their faculties are gentlemen of high standing in the community and in the church. We trust they will not repeat the example sometimes hitherto set before their classes, of tempting them into a debauch by inviting them to partake of intoxicating liquors. Medical students of all others are the most exposed. Away from their homes, with a narrow circle of acquaintance, and no local ties, the sense of their responsibility is exceedingly light upon them. Gathered here from the extreme parts of the Union, they naturally feel as one might feel in the heart of Germany without acquaintance—that their excesses are matters entirely their own;—that the harm they do them is over with the day's debauch. How miserable is the mistake, they are too apt to discover years afterwards. Of all men in the world, physicians should be men of sobriety; and the faculties of our Medical Colleges on points so vital as this should be thoroughly sound both in theory and practice.”

THE INJUSTICE OF BLANKS.—The December number of the Stethoscope contains a letter from a correspondent in this city, which has the following paragraph:

“Passing down Broadway, a flashy looking young man was pointed out to me as the drummer of ——— Medical School. The adoption of this system of drumming is one evidence of the degradation of our system of medical teaching. I know nothing of the extent to which it has been adopted, nor of the arts used by these hirelings, but I do know that if such means were used by physicians to gain practice, they would be shunned and denounced by every member of the profession who has any respect for himself and regard for the honor of the fraternity. A western paper exposed the infamous tricks resorted to by drummers of mercantile houses, who, it is said, hung about the public houses of the city, and by their insinuating, complaisant manners, gained a great deal of custom for their employers, which would otherwise have been shared by other and more honorable competitors in business. It was stated that the drummer would drink, smoke, and even play the part of a pimp with the un-

wary country customer, by introducing him to the *most respectable* bawdy-houses in the city. God forbid that such villainous arts should be practised by the caterer for the halls of medical instruction. But that there is a corrupt system in use I believe, for I have heard the complaint made that students who were advised to attend certain schools, were decoyed off elsewhere. No doubt this is frequently due to the influence of fellow students, but I think some fall victims to the arts of the drummer of ——— Medical College."

It is not evident why the learned editors of the *Stethroscope* allowed the two *blanks* of this paragraph to be inserted. If their correspondent filled them up, it may have been from a false delicacy that they struck out the name. But between the editors and correspondent a gross injustice has been, no doubt thoughtlessly, committed. Suppose it to be true of ——— Medical School in New York that such a person is employed. It is a disgrace to that school, and the profession at large should be warned of the artifices of the drummer. But a correspondent or an editor who pretends to utter such a warning should do it distinctly, that it may be known where the danger is. To do this requires some courage on the part of both, which, if it is a little deficient, is very readily increased by the shelter of a blank. Will our esteemed *confrères* consider the injustice they have done? There are in this city three Medical Schools. They assert of one that it employs a person to do what, if it were done by a physician desiring to obtain practice, would cause him to be "shunned and denounced by every member of the profession." They thus bring all three schools each under the suspicion that it is the guilty one, when from their own showing two must be innocent. Still, by this mode of attack the accused one has no opportunity of making a defence, if there be any—so that to the suspected and the unsuspected a gross wrong is done. We must, therefore, call upon our contemporaries to fill up the blanks of their correspondent's letter.

While upon this subject, we take the liberty to say that for such practices we have a profound contempt and disgust, and are sure that none would be more ready than ourselves to aid in suppressing such a practice. We may also say in advance that, should the blank be filled with the name of the New York Medical College, the conductors of the *MONTHLY* would give the statement a full and flat denial, as it would be false in every particular. No such person ever has been or ever will be employed by that institution. Of the other institutions we are not authorized to speak. They are abundantly able to do so themselves, and we trust they will have the opportunity, which can only be afforded them by the filling of these blanks.

THE AMERICAN MEDICAL MONTHLY.

FEBRUARY, 1855.

PART I.—ESSAYS, MONOGRAPHS, AND CASES.

Remarks on the Pathology and Treatment of Cholera. By D. S. Conant, M. D., Demonstrator of Anatomy in the New York Medical College. (Continued from the Nov. number.)

The subject of cholera has, from its prevalence during the past season, excited considerable interest, and elicited many discussions; and yet but few points have been made (and established) as to the nature and treatment of this fearful malady.

Having had the care of the Mott street Cholera Hospital, and also, by the kindness of the physicians of the Franklin street Hospital, the privilege of visiting that institution, and of assisting in their post mortem examinations, I have had opportunities of observing the disease, during the past epidemic, but rarely enjoyed.

This being the first opportunity I had ever had of witnessing the disease, as an epidemic, my mind was entirely unprejudiced as to its precise nature. I therefore commenced with a determination to ferret out its hiding-place, so far as I was able; or that at any rate I would lose no opportunity of noting down its various manifestations, either previous to or after death. In accordance with this resolution I have endeavored to make careful observation of all the incidents and indications as they have manifested themselves to my understanding.

As the statistical part of my report has already been published,* I have now only to consider the disease as it came under my observation.

The epidemic of 1854, so far as I am able to learn, has been characterized by no new phase, except perhaps a little more than the usual tendency to consecutive cerebral disturbance.

From the manner of the general onset of cholera, and from the circumstances under which it more commonly makes its attack, I am fully persuaded that the influence which originally produces the pathological change in the system, is either some peculiar atmospheric change, or a specific poison floating in the atmosphere, and which is absorbed from it as it is undergoing its chemical changes in the lungs, and then circulated through the system in the blood. Thus the whole system is brought under an influence strictly choleraic.

By this I do not mean to imply, that all who are brought under a choleraic influence must necessarily have an attack of cholera; but would rather believe that there are certain conditions of the system which almost absolutely defy the disease; these constituting perfect health—the regular and uninterrupted performance of all the functions of the animal and psychological economy. Such persons, although they may feel the influence of the poison in a measure, are seldom or never brought within its control.

Whatever this poison is, I think it is evidently perpetuated and increased in proportion to the amount of material it has to work upon in certain districts and localities. Accumulated filth, bad water, and uncleanness, all tend directly to increase the virulence of the disease; not only from the fact that the choleraic poison is thus intensified, but also that the power to resist its influence has been greatly impaired in those who have for a long time previously been subject to their influence.

The diarrhœa, which is usually called premonitory, and by many is considered a part of the disease, I believe to be nothing more than an ordinary diarrhœa, to which all are more or less liable, during those months in which cholera usually prevails. For, in very many instances, it does not exist at all; the patient being stricken down at once by the sudden giving way of the vital force.

* See Nov. (1854) number of the MONTHLY.

Considering, as I do, that the poison is in the atmosphere, it necessarily follows that all are more or less under its influence during the prevalence of an epidemic. But we require some depressing agent to bring the vital powers within the control of that influence, and it matters little what that agent is. Diarrhoea exhausts the vital powers, fear depresses the nerve force, and any powerful emotion renders the system less capable of resisting the influence of the poison ; and when once completely under its influence, it is so rapidly exhausted that it is exceedingly hard to again bring the system above the influence of the disease—especially if fear or any other powerful emotion has preceded the attack. Not that an emotion can produce the disease, but only act, so to depress the nerve force for the time, as to render the system more easily overcome by the choleraic influence.

I have the account of a case at hand which so completely illustrates my idea on this point, that I think I cannot do better than give it insertion here.

Bridget H., aged 20, was admitted to the hospital Sept. 13, vomiting and purging rice water, and strongly impressed with the idea that she should die, as her mother and sister had both died after a sickness of only one day ; her sister on the morning of the 13th, her mother on the 12th. This girl went down to collapse, but gradually began to convalesce, and on the morning of the 16th felt so well that she thought she could go to her home and see to the house. On her way she met a man who noticed that she did not look well, and asked her if she had been drinking. She answered no ; then telling where she had been, where she was going, &c. He foolishly replied to her that she had better get back to the hospital, for if she lived to get back, she would not get out again, as he could see death in her eyes then ! She came directly back, was gone from the hospital less than half an hour, went looking quite cheerful and happy, returned looking haggard, her eyes sunken, and she was obliged to creep up the stairs upon her hands and feet. This was at ten in the morning. She had but one passage from her bowels, which was copious, watery and bilious, until four in the afternoon, when she commenced vomiting and purging rice water again, with severe cramps. Again she went

down to the collapsed stage, firmly believing this time that she must die ; and it was not until three the next morning that she began, in spite of herself, to convalesce. Nine days after this she went out entirely well, saying she would like to see the man who could frighten her into cholera again.

I have no doubt but that the first attack, as well as the second, was brought on while under the influence of fear. Her mother had just died, her sister was dying, and she alone remained to take care of them. Fatigued and worn out with care of the dead and dying, exhausted with anxiety and fear from the sudden ravages the disease was making with her nearest friends, no one could be in a condition more readily to yield to the influence of this material poison, which was thus destroying her family.

The questions naturally arise here, how does the material poison produce the disease ; upon what organs does it act ; and what is the pathological state of those organs ?

It is well known that the principal peculiarity of any contagious disease is that it produces a disease similar to itself in the unprotected. But it is a general rule that after a person has been once afflicted with a contagious disease, that person is protected against another attack. It is a peculiarity of miasmatic poison that it produces chills and fever at regular intervals. But *how* a contagious disease produces its like, or *how* the miasma produces its effects, we are unable to say. These are apparently ultimate facts. So with the choleraic poison, we have an effect, without being able to say what the precise nature of the cause is, or precisely how it produces its effect. But I believe its peculiarity consists chiefly in this, that it acts directly upon the sympathetic system of nerves.

Upon no other grounds can we account for the phenomena produced during the onset, progress, and termination of the disease. At the onset of the disease proper, the patient feels a sudden sinking sensation before he vomits or purges to any extent. I believe this sensation is almost universal, and the patients assert that this was the time when they were seized. This I consider to be the time when the material poison has overcome the vital force, and the time also when the function of the sympathetic becomes almost totally paralyzed, so that

no organ depending upon it performs its functions regularly, and those most dependant upon it, least of all. The eyes become sunken, the features pinched, and the skin blue from this onset. The patient becomes heedless in regard to self-preservation, and in regard to the feeling of his friends around him.

In fact all those things which had previously engaged his most earnest sympathies and attention, are now uncared for ; and although his mind seems perfectly under his control, and his memory of the past clear and definite, yet he generally manifests not the least anxiety in regard to anything.

If you tell him he may not live, he will arrange matters preparatory to the coming event with as much coolness as though he was about to start on a journey of only two days' duration.

Now this state of things might seem to lead to the conclusion that the centre of emotion, whatever part or parts of the encephalon may constitute it, is the seat of the disease. But it is well understood that the feeling of apprehension or the opposite feeling in disease, depends much on the state of the organic functions, as is well illustrated in dyspepsia on the one hand and phthisis on the other. Here also we believe the feelings of indifference as to the result, depend on the state of the organic functions, and as these are controlled by the great sympathetic system, it indicates a paralysis more or less complete of the same.

Admitting that the function of the ganglionic system of nerves is paralyzed, it seems to me that we can then account for all these phenomena.

The capillaries of the chylo-poietic viscera, which are almost entirely under the control of this system of nerves, lose in a measure their vital properties, and become more like mechanical or artificial vessels for the transmission of blood ; but having lost their tone, are allowed to dilate to almost any extent which the *vis a tergo* may demand.

The blood arriving in these capillaries pours out all that portion of itself which is capable of being transuded through the mucous membrane into the stomach and duodenum.

The watery portion of the blood being thus thrown out, the blood becomes thickened, and circulates with difficulty through the capillaries of other parts of the body dependant upon the

spinal system of nerves for the regular performance of all their functions ; and by diastaltic action, the muscles are induced to contract in order that the blood may be forced on through their capillaries. Hence I do not consider cramps as a necessary part of cholera, but that they are produced rather by the thickened state than the poisoned condition of the blood, and therefore are a consequence rather than a diagnostic sign.

I believe, also, that it is this state, or condition of the blood, which induces a cessation of the action of the kidneys, in connection with the increased action of the intestines, for it is well known that with copious, watery evacuations from the bowels, renal action is entirely incompatible. Hence the urea must inevitably remain in the blood ; and it is a question in my mind, whether the consecutive cerebral disturbance, so often following cholera, is not dependant more upon this peculiar state of the blood than upon any other one thing ; or if it is not uræmia, rather than congestion proper.

The collapsed state of the cutaneous capillaries can easily be accounted for, when we remember that whenever there is an outlet to the general circulation, to this point the circulation tends with increased energy. Here the outlet being into the stomach and duodenum, the circulation is drawn from the external surface, and leaves it cold and clammy, as the insensible perspiration and the moisture in the air are, in a measure, condensed upon, rather than evaporated from the skin. But the excessive moisture of the collapsed stages is, probably, owing to outward transudation.

The *post-mortem* examinations were usually made in from one to six hours after death ; and the pathological appearances were as universally the same as in any class of diseases I have ever had an opportunity of investigating.

For a type of *external appearances*, we have the face contracted, eyes sunken, and pupils slightly dilated, (this is an interesting fact, which will be noticed again, inasmuch as we gave opium freely to almost all our cases,) the skin quite blue, especially upon the hands, face, and scrotum of the male ; hands shrivelled ; rigor-mortis usually well-marked after four or five hours. In some it was exceedingly strong.

Thorax.—The pleura-pulmonalis was almost invariably found

covered with a peculiar slimy substance, somewhat resembling exuded plasma; and I believe this substance has been considered as such, especially by those who think cholera to be an inflammatory disease. But I have considered it merely as a deposit, from the absorption of those fluids natural to the parts.

Post-mortem congestion, at the base of the lung, was usually well marked. Pericardium slightly moistened; in some cases more so than in others, though none are completely dry, as is the case with the peritoneum.

Upon the apex of the heart, and upon the anterior portion of the lungs, are occasionally found small patches, or spangles of injected capillaries, like ecchymosis; but these are by no means constant, either as regards locality or size.

Abdomen.—The peritoneum, especially the visceral portion, is strongly injected throughout its whole extent, except the covering of the stomach and duodenum, which is usually quite pale and anæmiated. It is always dry, not a particle of moisture apparently remaining in its cavity; the parietal portion, except being dry, is, in appearance, normal. The dryness of the peritoneum and pleura I consider to be owing to the absorption of their fluids; not from any tendency to inflammation, for in no case of pure cholera have I seen the least tendency to an inflammatory condition of the parts.

The *spleen*, so far as I was able to understand its condition, whenever found diseased, was so from other causes, rather than cholera. In some it was very large; in one there was a peculiar cartilaginous deposit upon its outer side, about an inch and a half square, and the eighth of an inch thick in the middle, beveled off to sharp edges.

The blood found in the spleen was always quite black and fluid.

The *kidneys* were usually found congested, more as if from mechanical force than from any condition of the organs themselves, to invite congestion. Little spangles of vessels were not unfrequently found covering their cortical portion; but upon cutting through the substance of the organ, and pressing out the blood, everything appeared perfectly normal, except the issuing of a milky fluid from the calices, supposed to be made up of epithelium scales, urea, &c., and this was found in every

instance. The *pancreas* is, without the slightest pathological change in its parts, visible to the naked eye ; it may be a little less moist upon being opened than natural. The *liver* is usually found of normal size ; at any rate, when it is found larger or smaller than natural, I think we may as well consider that this condition really existed previously to the attack of cholera, as that it was produced by the disease. This organ is also very much congested with thick black blood ; and this condition necessarily follows from the anatomical construction of its circulatory system, since the portal vein, which brings the greater proportion of blood to this organ, brings it from the chylipoietic viscera ; hence the blood has already been deprived of its watery portions before entering the organ. The liver is also often found with many lightish spots from one to four inches in diameter, as if affected with fatty degeneration. In fact, in one or two instances these pieces burned quite briskly upon a coal fire. These spots were more often found in those who had been previously addicted to intemperance ; but sometimes in those who had not, so far as we could learn.

The *gall-bladder* was always found full of bile, usually very dark, from the fact, I suppose, that the blood was so black from which it was secreted ; but in two instances of young persons, who were previously much anæmiated, the bile was quite light, like turbid water, resembling bile only in taste, but by no means so bitter as ordinary bile. The cystic and hepatic ducts, together with the ductus communis choledocus, were all full of bile. I have therefore considered the obstruction to the exit of the bile to be merely mechanical, from the contraction of the muscular coat of the duodenum. Of course there cannot be so much bile secreted as is normal, from the fact that the watery portions of the blood are wanting in a great measure to wash out the biliary ducts as fast as they are filled with the other elements of bile.

So in the *kidneys*, the urea may be secreted at first, but the water is wanting to wash out the uriniferous tubes ; and in both instances, of course, the natural function of the organs are interfered with.

The *urinary bladder* was invariably found perfectly contracted down to its smallest capacity, and hard, almost like the

uterus, being no larger than a hen's egg, and containing only a very slight amount of mucus, just enough to moisten the inner surface of the organ.

Now, having disposed of the other organs of the body proper, let us pass to the consideration of the *alimentary canal*, in which is seated the great centre of the choleraic manifestation.

The buccal cavity was slightly moistened with mucous, the pharynx and larynx dry; and there can be little doubt, I think, but that the husky voice and almost inaudible whisper are owing entirely to this condition of the mucous membrane around the vocal chords. The mucous membrane lining the œsophagus has a peculiarly dry, lightish appearance, and the line of demarcation between this and the mucous membrane of the stomach is perfectly distinct, showing the extent of the tessellated epithelium of the œsophagus, and the commencement of the conoidal epithelium of the stomach, which is about three-eighths of an inch below and around its cardiac orifice. The mucous membrane of this organ presented a peculiar parboiled or soaked appearance, and was somewhat softened, as if there had been a general breaking down of its epithelial coat, with here and there patches of congestion; but these were not constant, being found only in those who had been peculiarly healthy and robust previous to the attack of cholera.

The mucous membrane was also flabby, and rolled into large rugæ, apparently by the contraction of the muscular coat, and the whole intestinal canal was contracted down to nearly two-thirds its natural size.

At the pyloric extremity of the stomach the folds of mucous membrane were so large, and the muscular contraction so firm, that it was with difficulty the little finger could be pushed through into the duodenum, the mucous membrane of which has precisely the same appearance as that of the stomach; the *valvulæ conniventes* were very large. From the commencement of the jejunum, the mucous membrane begins to have less of the parboiled appearance, and more congestion even down to the colon. With this latter exception, the mucous membrane of the ilium presented quite a natural appearance. Peyer's patches presented nothing worthy of note; neither did I observe anything abnormal in the follicles of Lieberkuhn or Brunner's glands.

The mucous membrane of the colon was neither softened or parboiled in appearance, but occasionally was found of a clay color, from the contents of the viscera.

The rectum presented nothing worthy of note, unless the patient had suffered from dysenteric complication.

It would appear from the above account of the pathological appearance of the mucous membrane in the alimentary canal, that although it is nowhere perfectly normal, yet the principal part engaged in throwing out the vast quantities of fluid is in the stomach and duodenum.

Generally it will be found, I think, that more rice water is discharged upwards from the stomach than from the rectum. I believe this will be found to be the case invariably when the pyloric extremity of the stomach is so closely contracted as is mentioned above. Should the pylorus remain open, there might be such a thing as that the whole amount should be thrown off per rectum.

We shall have occasion again to compare the condition of the mucous membrane, in the upper and lower part of the alimentary canal, when we come to discuss the subject of treatment, which we propose to do after giving an account of the brain.

Head.—The veins of the scalp are usually filled, also, with dark blood to a moderate extent; but upon removing the calvarium, the meningeal veins are found filled to their utmost capacity. Within and beneath the arachnoid, large quantities of serum were usually found, from one to four or six ounces.

Here, again, as in the stomach and duodenum, where the capillaries are almost entirely under the control of the sympathetic, we find them losing their tonicity, and allowing the serum to be transuded through their walls into the cavities, around which they are distributed.

From a drachm to an ounce of serum was usually found in the ventricles of the brain. In one case, where there was very little fluid in the arachnoid, eight ounces were found in the ventricles. This was the brain of a man, thirty-five years old, a shoemaker by trade, who had seen but one sober day for two weeks, and who was admitted to the hospital in a moribund condition, but perfectly sane and conscious of all that was going on around him, though he lived but a few hours.

All the pathological appearances above mentioned were well marked in this case. The cerebral arachnoid in many instances presented an oedematous appearance, the membrane being of a lightish, opaque color, as if from the exudation of lymph ; but upon a more careful examination, it proved to be only oedema in the areolar tissue. The vessels around the base of the brain were filled with blood, more red than that around other parts of the organ. When the blood was allowed to run out upon the table, it rapidly underwent a chemical change, and turned from an almost black to a light, and in some cases, almost white, pink color, resembling very strikingly vermillion, mixed with a large proportion of white lead.

Upon dissecting away the substance of the brain, nothing peculiar presented itself, except that from the *puncta vasculosa*, throughout the *centrum ovale majus*, blood seemed to come up rather more freely than natural ; though, perhaps, the fluidity of the blood might account principally for this, yet I think not entirely. Except this, no marked pathological state was found in any portion of the substance of the brain. But upon dissecting out the *pituitary body* at the base of the brain, it was invariably found more or less hardened. In some cases, this organ was so hard, as to be with difficulty crushed between the thumb and finger. Now, the position being proved that this is the great centre of all sympathetic action, I believe cholera is proved to be a disease of the sympathetic system of nerves. In support of the above position, I will here quote from Solly on the Brain, page 432 :

“I think it not at all improbable that the reason why these capillaries of the brain thus suddenly and unnaturally neglect to perform their duty, is some defective innervation from the sympathetic nerves, whose office I hold to be the regulation of the coat of the arteries, so as to produce secretions, &c. ; and, so far, I can see much probability in the opinion of the Wenzels, that the pituitary gland is in fault in epilepsy, believing, as I do, with Dr. Copland, that this gland is the cerebral ganglion of the nervous system.”

Having called the attention of many members of the profession to the condition of this organ in my post-mortem examinations, all were agreed as to this, that it was decidedly harden-

ed ; but I have never been able to satisfy myself as to what produced this peculiar state, only that it was a peculiarity of the disease. And here I am obliged to let this subject rest, for the present at least.

It will be seen in review that the capillaries of the cerebral meninges, and also the capillaries of the mucous membrane of the stomach and duodenum, are those most affected in cholera. And it will be recollected that it is upon these organs, more than any other, save the heart, that our emotions produce their effects. By a powerful emotion, the process of digestion may be suspended, or even the stomach may be made to eject its contents. Hence it may be said, that a person suffering from any severely-painful emotion, may be pre-disposed to an attack of cholera, especially if, at the same time, they be subjected to the choleraic influence when epidemic.

It therefore behooves all who would shun the disease to disregard it as much as possible ; that is, to have no fear of it, and never to dwell upon its consequences ; in a word, to keep the mind at rest, the body clean, and be careful to take such food as is found to keep the functions of the animal economy in the most perfect order—guarding against fatigue and over-exertion ; against sleeping in damp places, and everything which tends to diminish the vital force of the system. Alcohol stimulates for a time, but is followed by a corresponding degree of depression which renders the system exceedingly liable to an attack of this disease. Night-watching, and the Irish custom of “waking the dead,” are also fruitful sources of the malady. When thus produced, the disease usually ran a rapid course, as the patients were generally admitted in such a condition as to render all treatment entirely useless.

The treatment which was found most successful in Mott street Hospital was varied with the various stages of the disease as follows.

When the patient was brought in early with alvine discharge of a bilious nature, the directions were acetat. plumbi. gr. iij., opii, gr. j., every two or three hours, with beef tea and brandy ; mustard to the abdomen, calves of the legs, feet, &c., with hot drinks and perfect rest. If the cramps were severe, the heater was used, which is a bent tin tube, placed over an

alcohol lamp, and reaching up beneath the bed-clothes. This was found a valuable addition in keeping the patient warm.

The acetate of lead and opium were expected to act sufficiently upon the mucous membrane of the stomach to prevent the secretion from going on so rapidly. The beef tea and brandy were to stimulate the system, and raise and sustain it above the influence of the choleraic poison ; while the sinapisms acted to divert the current of the circulation from the internal organs.

If the patient was admitted vomiting and purging rice water, recourse was immediately had to hydrarg. sub. mur. gra. iij. opii. gr. ii., creosoti gras. ii., in the form of a pill, given every one, two, or three hours ; hot drinks, in small quantities, given often ; mustard as before, and perfect rest insisted upon.

The pill was given with a view to its sedative, alterative, and astringent effect upon the mucous membrane of the stomach. But in this stage of the disease stimulants and tonics were found to be of more service, if given by the rectum, from the fact that the mucous membrane of the stomach is in a condition to throw out rather than to absorb. This is evident from another fact, that the tincture of opium may be given, in from one to three drachm doses, into the stomach, without the least manifestation of its presence upon the brain or upon the pupils ; while the half of a drachm given by the rectum will act more promptly and decidedly upon both than when given by the stomach even, when the lining membrane is in its natural condition.

Hot drinks were resorted to, on account of having seen cramps produced in the hands and arms from handling ice, in several instances, at the first opening of the hospital ; for, though the patients complained of great heat, when the surface, breath, and tongue were all cold, we considered this to be but a misinterpretation of the cause of the sensation ; they are really freezing with cold, while they believe they are being burned up with heat. Ice will only alleviate the sensation while it is in contact with the membrane, though thirst is not at all diminished by it ; while the use of hot drinks not only alleviates the unpleasant sensation of heat, but at the same time decidedly relieves the terrible thirst. It was perfectly

astonishing what a degree of heat the patient would prefer, never complaining of the heat, except when the drinks were given at a low temperature.

As in fevers, when the skin and mucous membrane are hot and dry, cold drinks prove exceedingly grateful to the patient, and at the same time tend to relieve the morbid condition of the system ; so I believe in cholera, when the skin and mucous membrane are cold, *hot* drinks will, while they prove grateful to the patient, be of infinitely more service than cold in the treatment of the malady.

At all events, I became perfectly satisfied of this, that my patients retained medicines better, reacted better, and were better every way, while using hot drinks, than while using cold.

The hospital was visited by a large number of physicians, each one of whom had his own favorite treatment of cholera, many of which I was induced to try with those patients upon whom I had already pronounced an unfavorable prognosis. But I found none which, in my hands, was thought to answer so good a purpose as the course we had already established.

At first, in the stage above considered, we were accustomed to use capsicum, or camphor, instead of creosote. But the creosote was suggested by Dr. J. L. Owen, of the steamship *Star of the West*, who had seen the disease in various parts of the world, and it was found to be a valuable change. Reaction was decidedly more mild ; so much so, that we felt quite sure of the recovery of those patients who were admitted previously to the stage of confirmed collapse.

When the patient had entirely ceased vomiting and purging, if the cramps continued, the external applications were resorted to, together with the heater. If the cramps were severe, we used the saturated solution of camphor in chloroform, or chloroform ʒj., camphor ʒij. (and of this mixture, ten drops were given every ten minutes, so long as cramps continued. We tried many other mixtures for this indication, but found none to answer so good a purpose as the one above mentioned.

In this stage we gave for the regular medicine, hydrarg. sub. mur. gra. v., rhei. gra. v., in powder, every three hours, until

six powders had been taken. This was given with the idea of exciting the flow of bile, and of arousing the liver to its work of assisting in the decarbonization of the blood.

When our patients were admitted moribund, very little medicine was resorted to, more than hot drinks, beef tea, brandy, &c., with external applications. Sometimes they would rally for an hour or so, but they invariably died in less than six hours. Many of these, as well as many of those in confirmed collapse, brought homœopathic medicine with them, to let us see what they had been taking. One homœopathic doctor came with his patient, and produced an ounce vial two-thirds full of the most intensely acrid mixture. He assured me he had given the girl a tablespoonful of that mixture every fifteen minutes for an hour and a half, and that it worked like a charm. Still he did not exactly like her looks, and thought she had better be in the hospital. He was surprised when told that she was moribund, and still more surprised, upon coming back to hear how she was, to learn that she died in two and a half hours from her admission. It is a lamentable fact, that the cholera hospitals of this city, during the epidemic of 1854, were used by many who had the care of those suffering with cholera, I might almost say as *dead-houses*, into which they could drive their patients when hope was gone, and behind which they could shield themselves, and thus be protected from the stigma which would otherwise rest upon them; such still boasting that they never lose their patients with cholera oftener than one in a hundred.

In regard to the *pulse* of cholera patients, I believe the prognosis may be founded with more certainty upon its condition than upon any other one symptom taken alone.

It was found almost invariably that if patients, when admitted, had a small, wiry pulse—even if it was no more than seventy per minute—yet the patients would not rally in the least. On the other hand, if the patient was entirely pulseless at the wrist, but it was found that the pulse in the brachial artery was soft and compressible, even though much more frequent than in the previous case, the patient was considered as comparatively safe. Hence the importance of giving the pulse a careful examination in reference to its condition, as well as

its frequency, before making a decided prognosis ; otherwise we shall find ourselves woefully disappointed by having patients in the former condition die, and have the wind taken from our sails, if by any chance patients in the latter condition fall into the hands of empirics. The pulse was also found to be a very sure criterion in the consecutive stage, the same pulse indicating a favorable or unfavorable termination, as before stated.

This stage, we may, however, remark, never occurred under our observation, except as a sequel of decided collapse ; in it our patients were treated as for uræmia, and the various indications were fulfilled, as they arose, without any fixed and definite treatment.

I have thus given in as few words as possible a history of my labors in the Mott street Hospital during the past epidemic. If from the mode of treatment here laid down, any practitioner shall be enabled to save the life of a single patient, or if a single point has been made and established to the satisfaction of my professional brethren, as to the nature of the disease, I shall feel more than rewarded for the labor incurred.

Life and Writings of Paracelsus : an Introductory Lecture to the Course, on Materia Medica and Therapeutics, at Dartmouth College, delivered October 9, 1854. By ALBERT SMITH, M.D., Professor of Materia Medica and Therapeutics.

THE annals of the past, in the medical profession, are full of interest, as showing the gradual development of principles, that form the basis of many of the existing opinions of our day. The progress of medical science has been slow—it has been the dim vision first, then the misty shadowing of some truth, that has struggled on with new accessions of light, as it emerged from a dark age to a brighter period, till it came forth invested with all the certainty of which it was capable. It is not to the past that we look for truths in our science, but only for the germs of truth. We there see great minds struggling with the superstitious, absurd theories, and the universal ignorance of the age in which they lived. We can truly enter-

tain but little reverence for the opinions of the ancients on medical subjects ; and we are satisfied it would be useless, and worse than useless, to study the old writers for the few grains of wheat that would be found in the almost interminable mass of folly and absurdity.

Even Hippocrates, who wrote so much that has come down to us deserving respect, as the result of his experience, would poorly repay the irksome labor of a perusal of his extensive works if they were to be clothed in the best English dress. We should pause and wonder how a man, whose common sense had put forth so many truths, could have written so much that is puerile and absurd. Galen would seem to be entitled to even less respect than Hippocrates, though more voluminous as a writer.

We need feel no regret that these two ancient writers have never been translated into our language. Such theories and hypotheses as they advanced and maintained to elucidate processes and truths, now made plain by the progress of our art, could not be read with patience. These writings, now, can have no merit, only as matters of curiosity, illustrating how powerful minds were obliged to grope their way when all was darkness around them.

It will not be inappropriate to this occasion to briefly consider the life and character of Paracelsus, whose writings and theories, like those of all his predecessors, are now worthless ; and yet who, in the province of materia medica, rendered an important service to the profession.

He is an interesting character among our predecessors, having exerted a great influence upon the medical world for many ages succeeding his strange career. Even now he stands out prominently the Prince of Quacks, and the model of all foolish, boasting, and absurd pretenders in the healing art.

I shall briefly call your attention to the state of the medical world just preceding the appearance of Paracelsus, as it tends to illustrate the history and career of this extraordinary man.

The progress of medical science has always been slow. A practice which aided greatly to its advancement began to prevail about the 15th century, viz. : the publication of monographs of particular diseases and of individual cases, reports

of hospitals and other institutions. Many of these early collections were crude, made without judgment and much diagnosis or discrimination, consisting often of marvellous stories, from which no practical inferences could be deduced. They led, however, to more accurate observations, to the observance of facts more than mere hypothesis, and proved highly serviceable in the progress of medical science.

The plan was generally adopted in the succeeding age, with a greatly improved method, which has no doubt proved one of the most efficient means by which medical knowledge has so rapidly advanced in modern times.

The progress of Chemistry about this period (the 15th century) exercised a great influence on the advancement of medical science. It had failed in its primary object—that of discovering some substance capable of transmuting the baser metals into gold, called the *philosopher's stone*; yet it imparted a knowledge of the nature and properties of bodies, and of various compounds very useful in the arts of life, and especially in pharmacy. We owe to the Arabian chemists the discovery of the process of distillation, and the art of preparing extracts; they also introduced the use of sugar into pharmacy, instead of honey, in the composition of syrups and conserves; and they seem also to have made some approach to the formation of mineral acids, and to have procured several of the earthy and neutral salts.

The art of Alchemy, practised by the Arabians, was transferred to the different countries of Europe, and pursued with even more superstition and credulity. Among the great men who shone in this age, and were carried away with this delusion, was Roger Bacon; he was classed with the alchemists, inasmuch as he adopted some of their principles and practices; but in the turn of his mind, and in the spirit in which he entered upon his experimental researches, he exhibited a genius which far outstripped the age in which he lived. The *philosopher's stone*, which was the object of so much painful research, beside its property of producing gold, was supposed also to possess the power of curing all diseases, and hence obtained the title of the universal medicine, or "Elixir of Life." These vain and fantastical notions led indirectly to many pharmaceutica

discoveries of the greatest importance ; to this are we indebted for the mercurial preparations, and for the experiments of Basil Valentine on Antimony, which led to their introduction into medicine about the end of the 14th century.

About the beginning of the 15th century a spirit of general improvement began to manifest itself. The arts and sciences gradually revived ; philosophy in all its branches was studied on a more correct plan and with a more enlightened object, and medicine was not slow in partaking of its beneficial influence. One of the first symptoms of this improvement was an increasing relish for the writings of Hippocrates, who had almost entirely been superseded by Galen, and a revival of his method of studying and practising medicine. The taste for complicated theory and refined speculation, so in accordance with the Galenic doctrines, gradually declined, and in the same proportion the value of correct observation and accurate detail of facts began to be estimated.

The circumstance which tended in a considerable degree to shake the authority of Galen, and diminish the veneration in which his opinions had been held for so many ages, was the rise of the sect of the Chemical Physicians. After chemistry had been used with advantage for the purpose of improving the processes of pharmacy, it was applied to the explanation of the phenomena of vitality, and the operation of morbid causes on the living system. The theories of these Chemical Physicians we now regard as altogether false and inapplicable, but they were advanced with so much confidence that they obtained many adherents, and for some time the opinions of the medical world were divided between the rival doctrines of the Galenists and the Chemists.

Among the most noted supporters of the chemical theory was Paracelsus, an individual whose claims to our notice depends more upon his consummate vanity and presumption than his abilities and acquirements.

He marked the age in which he lived. He has come down to us the strangest compound of learning, talent, credulity, bombast, conceit, and utter moral degradation, of all our predecessors. He stands the anti-type of all modern empiricism, the founder of quackery, the first to dignify secret nostrums

with learning and science, to lead the people astray with pretensions all unfounded ; and with boasting and braggartism to furnish a model for all succeeding quacks, learned and unlearned. He was no less an example for his worthy followers of our times, in his shameful disregard of all principle and truth. We can hardly call him a great light of his age, except in the same sense in which we should feel disposed to laud that *being*, unceremoniously denominated in Sacred Writ “the father of lies,”—a species of greatness appertaining to each, that no man with honest aspirations would desire to attain.

“Paracelsus* was born in 1493, near Zurich, in Switzerland ; and his father, William De Hóhenheim, supposed to have been the natural son of a Grand Master of the Teutonic Order, was a practitioner of medicine in Carinthia in the beginning of the following century. With a view of dignifying himself and his family, his son assumed the name of Phillippus, Aureolus, Theophrastus, Paracelsus, Bombastus de Hohenheim. His father gave him early a turn for his own pursuits, and put him under the care of John Trithemius, abbot of Spanheim, at that time eminent for his knowledge of the *Spagiric* art, as chemistry in its infancy was called.

“He afterwards followed another master of the art, Sigismund Fuggerus, and from both of these he learned many secrets. If any credit is due to his own statements, he received instructions from several other tutors, whom he named ; although in one of his treatises he denies having had any instructors at all. He very soon commenced a rambling life ; for he says he had examined the principles of the medical art with great attention, and found them defective and erroneous in all points ; and therefore he resolved, after having visited the schools of France, Italy, and Germany, to travel in pursuit of medical truth ; and not only to search for it among physicians and other learned persons, but among barber-surgeons, monks, conjurors, old women, and quacks of every description. He makes a pompous display of the names of the countries which he thus visited, during a pègrination of several years, and of the important acquisitions in science which he thus collected, with the view of impressing on the world the highest opinion of his superior-

* Rees' Encyclopædia, Art. Paracelsus.

ity, for he seems to have possessed the talents for imposition and successful quackery in an eminent degree. In the course of his travels he had doubtless collected much information concerning metallic chemistry, which, however, he perverted to the vain search of the *philosopher's stone*; and by the bold use of some active medicines, especially mercury and opium, the administration and properties of which were not understood by medical men, he had certainly effected many cures where ordinary medicines had failed; and while these successful cases were blazoned forth with the usual exaggerations, the unsuccessful ones and the mistakes were long passed over in silence.

“To such a height, however, his reputation had been raised in Switzerland, that the magistrates of Basle were induced to engage him, at a large salary, to fill the chair of medicine in their university. In the years 1527–8, he gave lectures daily, sometimes in barbarous Latin, but more frequently in German; and although he at first acquired several enthusiastic adherents, yet the barbarism, vanity, and extravagance of his lectures at length disgusted the students, and he was soon left without an audience. Indeed nothing could exceed the ridiculous pride and bombast with which he assumed the supremacy, the monarchy of medicine, and the contempt which he affected towards all the teachers and universities in the world.”

Seated in his professorial chair, at his first lecture he publicly burned the works of Galen, Avicenna, and other standard authors of his time, declaring that “his cap contained more knowledge than all physicians, and that his beard was more learned than all the academies together, and that his hair contained more science than all the philosophers who had ever lived.”

“Greeks, Romans, French, Italians, (he exclaims;) you Galen, you Rhazes, you Mesue, you doctors of Paris, you of Montpellier, you of Swabia, you of Misnia, you of Cologne, you of Vienna, and all you throughout the countries that are washed by the Danube and the Rhine, and you who inhabit the islands of the sea—Athenian, Greek, Arab, and Jew—you shall follow and obey me; I am your king; the monarchy of physic is mine!” &c., &c. And he is said to have declared to his audience “that if God would not impart the secrets of physic,

it was not only allowable, but even justifiable, to consult the devil."

"That such an extravagant enthusiast should not long retain his chair might be anticipated. A quarrel with the magistrates of Basle, on account of a decision against him in respect to a demand of fees which was deemed exorbitant, increased his displeasure, and he suddenly quitted that place in 1528. From this time he resided chiefly in Alsacé, and in different parts of Germany, leading a life of extreme intemperance, in the lowest company, being frequently in a state of intoxication for many days and nights in succession. Nevertheless he still maintained his reputation by extraordinary cures, occasionally effected by his powerful remedies, though his failures were equally conspicuous." But the most signal failure of his boasted remedies occurred in his own person. Although he boasted of possessing a *panacea* which was capable of curing all diseases in an instant, and even of prolonging life to an indefinite length, yet this drunkard and prince of empirics died of an attack of a fever after a few hours' illness, in the 48th year of his age, at an inn in Stratzburg, in Bavaria, with a bottle of his immortal Catholicon in his pocket.

This is nearly all that has come down to us of the personal history of Paracelsus—a man, as we have seen, of no principle, yet by the force of his genius and enthusiasm destined to produce a greater revolution in the *materia medica*, and a greater change in medical opinions and practice, than any person who had appeared since the days of Galen.

At the period when Paracelsus appeared, the doctrines of Galen prevailed, and held an absolute dominion over all the learned of the age; so that no one thought of discovering any new truths, or of enlarging the domains of medical knowledge. The learned spent their powers in making commentaries on Galen; they were bound down by this authority with a power from which they could not yet be disenthralled. Never did the iron rule of despotic public opinion bear down the dark ages of the world equal to this. Galen was the sole and entire authority appealed to. Hippocrates was quite put into the shade. Translations, commentaries, and expositions of this

writer were all that could appear in the medical literature of these times.

In the 15th century a revolution in public opinion was impending, "by* which the unbounded veneration for the ancients was to be destroyed, or the attachment to them reduced within its just limits." This was accomplished by the labors of two description of men, totally different in their characters and pursuits, but who incidentally corresponded to bring about the same ultimate effect—the Chemists and Anatomists." The anatomists, who had clearly demonstrated the monstrous errors and absurdities of Galen, whose anatomy was founded on the dissection of animals, would submit no longer to the rule of ignorance and presumption, but boldly taught the true doctrine amid a world of calumny and abuse. Truth made its way slowly but surely ; and with the revival of letters, the power of Galen over the world grew less and less, and in time was entirely supplanted by the labors of many eminent men who now appeared. The simplicity and genius of Hippocrates came now to be more and more regarded, and the great truths that breathe out in his wonderful works were received and adopted. He was considered one of the most remarkable men that ever lived, whose maxims and precepts have already influenced the world more than twenty-two hundred years, and may, for all we know, influence it twice or thrice that period to come. The revival of medical literature was the delivery from the thralldom of the Galenic doctrine—a freedom to investigate and adopt whatever should be found to be true, without fear of controverting any great existing doctrines. The noble men, who in this department seemed to be tied down to dogmas they knew to be false, triumphantly overthrew the whole structure of the ancient medical doctrines, and put forth their discoveries, founded on the actual dissection of the human subject, from which there was no escape.

It should also be remarked that this age was characterized by a general belief in astrology ; and that even the most gifted, as well as the ignorant, were carried away with the absurd pretences of astrological science. "The belief in the influences of demons, the efficacy of magic, and the powers of witchcraft,

* Edinburgh Encyclopædia, Art. Med.

became very prevalent throughout Europe, and perhaps in no part of it to a greater degree than in England, which acquired the repute of being the country of witches. Even the illustrious Luther was so completely biased by the prejudices of his age, that he ascribed the majority of diseases to the arts of the *devil*, and found great fault with physicians when they attempted to account for them by natural causes. Alchemy had hitherto been cultivated only by the most illiterate men; but the introduction of theosophism and the cabalistic art brought the study into great vogue, and it was henceforth prosecuted with much eagerness by the monks and wandering scholastics (*scholastici vagrantes*), under the patronage of kings and princes, who fondly hoped to augment their revenues by the products of this art. Though a law was passed by Henry IV., condemning as impostors the alchemists, who were very numerous in England, yet they contrived to maintain their ground, and practised so adroitly on the weakness of his successor, Henry VI., that this monarch, finding his treasures exhausted by the unfortunate wars in which he had engaged, granted to certain transmuters of metals the privilege of making gold, and preparing the elixir of life. The labors of Basilus Valentinus, the reputed author of the '*Cursus Antimonii Triumphalis*,' and of Isaac C. Hollandois, were rather more usefully directed; but it was reserved for Paracelsus to appropriate to himself all the knowledge which his predecessors had attained in this branch of learning, and to apply it with success to medicine."*

In contemplating the career of this extraordinary man (says Paris†), it is difficult to say whether disgust or astonishment is the most predominant feeling; his insolence and unparalleled conceit, his insincerity and brutal irregularities, and his habits of immorality and debauchery, are beyond all censure; whilst the important services he has rendered mankind by opposing the bigotry of the schools, and introducing powerful remedies into practice, cannot be recorded without feelings of gratitude and respect; but in whatever estimation Paracelsus may be held, there can be no doubt but that his fame produced a very

* Rees Enc., vol. 23, Art. Med.

† Pharmacologia, p. 50.

considerable influence on the character of the age, by exciting the envy of some, the emulation of others, and the industry of all."

The early education of Paracelsus would appear to have been greatly neglected; and, notwithstanding his asseveration that he had been at German, French, and Italian universities, it is sufficiently evident from his writings that he could never have enjoyed the benefit of proper classical instruction.

The obscure and barbarous style in which his writings are composed has rendered it a matter of great difficulty to give a clear account of his speculative opinions. The indefatigable Hensler, who endeavored to unravel the confusion of his system, and make his writings and theories intelligible, complains that it was the business of several months. Certain, however, it is, that there never was a more glaring example of the error to which chemists have ever been prone—that of carrying into other sciences what Bacon calls, "the smoke and tarnish of the furnace."

"The elements of the living system he fancied to be the same as those of his laboratory; and sulphur, salts, and mercury, were, according to Paracelsus, the constituents of all organized bodies. They were combined by chemical operations, and their relations were governed by an *Archeus*, or demon, who performed the part of alchemist in the stomach, who separated the poisonous from the nutritive part of the food, and who communicated the tincture by which the food became capable of assimilation. This governor in the stomach, this *spiritus vitæ*, this astral body of man, was the immediate cause of all diseases, and the chief agent in their cure; yet each member of the body was supposed to have its peculiar stomach, by which the work of secretion was effected. Diseases were produced by certain influences, of which Paracelsus reckoned five, viz.: *ens astrale*, *ens veneni*, *ens naturâle*, *ens spirituale*, and *ens dei*. When the archeus was sick, putrescence was occasioned, and that either *localiter* or *emuntorialiter*. Tartarus, or a certain morbid matter, was the cause of all disorders, exhibiting a viscosity of the fluids, rigidity of the solids, or a concretion of earthy matter, and was believed to be secreted when archeus operated in an irregular or too potent a manner, and digestion

was too fully performed. Such speculations, abstractly considered, were no doubt very absurd ; but when divested of the cabalistic jargon in which they have been enveloped, they will be found to contain a certain portion of truth.”*

“The best and most original of Paracelsus’ works is his treatise, in three books, on the venereal disease, in which he has given a minute description of the various forms of syphilis and shown in what manner other disorders were liable to be modified by its presence ; and in which he has successfully exposed the errors, or, as he terms them, “impostures,” of the then prevailing practice. Instead of the inert fumigations, quintessences, and diet drinks, which were in vogue, he recommended mercury as the only remedy on which dependence could be placed, and exhibited it both internally and by the way of friction. Medicine in general was indebted to him for the free introduction of this and other mineral remedies, and of opium, and for pointing out the necessity of attending to chemical actions in pharmaceutical operations. To complex prescriptions, so common in his age, he was no friend ; he ridiculed with considerable effect the absurdity of imagining that forty or fifty simples in a compound would all retain and exert their separate virtues.”

I have thus far presented the most favorable view of the writings of Paracelsus ; many of his other speculations are too absurd to be repeated. It must, however, be confessed that he conferred a substantial benefit on mankind by the introduction of mercury as a cure of syphilis ; and in this point consists his principal merit in respect to medicine.

“For his total ignorance of anatomy and rational physiology, his inability, from a want of literature, to investigate the doctrines of the ancients, which he so boldly impugned, and his employment of a barbarous jargon, as well as his infatuated notions of magic, astrology, necromancy, or geomancy, and all the other branches of mystical impostures, are totally adverse to any claim on his part to the improvement of medical science ; and indeed he appears to have been entirely destitute of clear and methodical views upon any subject.”†

* Ree’s Enc. Art. Med.

† Ree’s Art. Paracelsus.

I will now advert to some of the views of Paracelsus which will not present him in so favorable a light, and give more ground for the many hard epithets which have been heaped upon his character.

He believed that Adam and Eve were not created each with particular organs of generation before the fall, but that sexual peculiarities were a consequence of that untoward event. This is on the authority of the learned Dr. Bayle.* He pretended also to cure wounds by anointing the instrument which inflicted them with a charmed salve.†

But as a climax to all his absurdities—he has handed down a recipe for the production of a human being, or a fairy, as he calls it, from the primitive elements.‡ I have not been able to learn what they were or how combined; but he directs that after they are properly mixed, they should be put into a glass bottle containing fuming manure, and then stopped tight. After a while the impurities become incorporated with the pure essence formed by the combination of the elements, in the proportions proper to our humanity. The being grows, and finally bursts the bottle and comes forth into the world. An Italian doctor gravely adds, in mentioning this experiment, that it is very easily tried, but that the products never grow larger than puppies, and are good for nothing except for pretty playthings!

Old Burton, in his “Anatomy of Melancholy,” a book, of which Dr. Johnson said, “that it was the only book which took him from his bed sooner than he wished to rise,” has the following on Paracelsus :

* Bayle’s General Dictionary, London edition, translated into English, in 10 volumes. Article Paracelsus.

† See Sir Thomas Browne’s work, vol. 3d, p. 27, note.

‡ D’Israeli’s “Curiosities of Literature ;” in the chapter “Dreams at the dawn of philosophy,” London edition, 1838, page 479, we find the following: “Paracelsus has revealed to us one of the grandest secrets of nature. When the world began to dispute on the existence of the elementary folk, it was then that he boldly offered to give birth to a fairy, and he has sent down to posterity the recipe. He describes the impurity which is to be translated into such purity, the gross elements of a delicate fairy, which fixed in a phial, placed in fuming dung, will in due time settle into a full grown fairy, bursting through its vitreous prison, on the vivifying principle by which the ancient Egyptians hatched eggs in ovens.”

"Paracelsus and his chymistical followers, as so many Promethee, will fetch fire from heaven, will cure all manner of diseases with minerals, accounting them the only kind of physic on the other side. Paracelsus calls Galen, Hippocrates, and all their adherents, infants, idiots, sophisters, &c.

'Apagiris istos qui vulcanias istas metamorphoses sugellant insitiæ soboles, supinæ pertenaciæ alumnos.'

'Away with those who scorn these Vulcanian changes, the offspring of ignorance and the nurslings of an indolent pertinacity ;' not worthy of the name of physicians for want of these remedies, and brags that by these he can make a man live 160 years, or to the world's end. With their Alexipharmaceums, panaceas, unguentum, armasium, and such magnetical cures, *lampas vitæ et mortis*, *balneum Dianæ*, *balsamum*, *electruæ*, *magico-physicum*, *amuleta martialia*, &c., what will not he and his followers effect? He brags, moreover, that he was "primus medicorum," and did more famous cures than all the physicians in Europe besides! A drop of his preparations should go farther than a drachm or ounce of theirs, those loathsome and filthy, fulsome potions, heteroclitical pills, (so he calls them) horse medicines, *ad quorum aspectum Cyclops Polyphemus ex herescet*."

This is Paracelsus' defence of minerals.

Again, speaking of the differences of theories between the predecessors of Paracelsus and himself and followers, old Burton says :—

"But why do I meddle with this great controversy, which is the subject of many volumes? Let Paracelsus, Quercetan, Crollius, and the brethren of the *rosy cross* defend themselves as they may. Crato, Erastus, and the Galenists, oppugn Paracelsus! He brags, on the other side, he did more famous cures by this means than all the Galenists in Europe, and calls himself a monarch, Galen and Hippocrates infants, illiterate, &c. As Thessalus of old railed against those ancient Asclepiadean writers, he condemns others—insults, triumphs, overcomes all antiquity (saith Galen, as if he spake to him), declares himself a conqueror, and crowns his own doings. One drop of their chymical preparations shall do more good than all their (Galenists) fulsome potions. Erastus and the rest of the Galenists

vilified them on the other side as *heretics* in physic. Paracelsus did that in physic which Luther did in divinity. A drunken rogue he was, a base fellow, a magician—he had the devil for his master, devils his familiar companions; and what he did, was done by the help of the *devil*. Thus they contend and rail, and many must write books pro and con. Let them agree as they will! I proceed!” Thus far old Burton.

I have now exhibited all the personal history of Paracelsus extant, and such an account of his medical writings and opinions as I could gather from the small amount of them which time has not swept off, as among the worthless things of earth. I have indeed presented a sorry character in the reformer of my branch of medicine. He was a man deficient in all the moral virtues, and yet possessed of talent and genius enough to accomplish a most important and desirable reform in the medical world.

The point in which I view him with the most interest is, as the great antitype of all modern quackery. It is from this source that the arrogant pretensions, bold assumptions, and unhesitating promises of cure all proceed. The lapse of more than three hundred years has brought with it but a little softening of the impudence and braggartism of Paracelsus. It is now, as then, that denunciatory language towards the profession, and gross epithets of ignorance, baseness and cupidity towards its followers, self-exaltation, bold pretension, and the ascription of unheard of powers to their remedies, distinguish modern as it did the ancient quacks. Paracelsus had the folly and temerity to call Galen and Hippocrates infants, illiterate, &c. The whole history of his career shows that he was a man of no principle or integrity—the good that he did the world was not the result of his efforts to benefit mankind, but rather the wish to triumph over the Galenists, and to put down this great overruling sect in medicine. We honor him for the deed, and should respect his memory, did not his extravagance clearly demonstrate that he was only the wilful partisan, now plying, as it were, by accident, at the right oar, with sinister motive. I have already said that Paracelsus lacked classical attainments, and yet it cannot be denied that he possessed a considerable share of genius.

We are not to imagine that empiricism and ignorance always go together. It would be more correct to suppose that empiricism and rascality are always associated. In my experience, no man can meddle with, espouse, defend and recommend any of the forms of empiricism, without really suffering some moral delinquency in his own character. Paracelsus made shipwreck of every moral virtue, and died a poor, miserable, filthy and besotted drunkard. You would as soon look for pearls among swine, as for any of the higher virtues and christian graces among professed quacks. What can we expect of an individual in the daily exercise of nothing but bold assumption, unfounded pretension, and unblushing deceit? A moral, christian character! It would be like bringing together as synonymes *saint* and *devil*, and calling the latter the better character, because of his sagacity and adroitness in making poor mortals do his unhallowed bidding. We see that the very corner stone of empiricism is immorality and dishonesty. It is now just what it was, as exhibited by Paracelsus—he is the great model of all his successors; though he may be more extravagant than some, he was also more honest—yet in his case and theirs, empiricism had thrust out all the christian virtues from the character.

There is one feature in empiricism that has remained the same from Paracelsus down to our times. I mean the favor which new forms of quackery, or old forms put forth with boldness, plausibility, and infinite assumption, meet with among even the intelligent and well informed in society. Even the learned Erasmus appears to have consulted him, having discarded an accomplished physician, whom he greatly extols in his epistles, and gave faith and credence to the doctrines and pretensions of this enthusiast. If modern times, says Sir George Baker, had not furnished similar instances of folly and delusion in the learned and gifted of the earth, this would be a matter of great astonishment. We meet with many Erasmuses of our day, men of learning, of standing, and apparent virtue, giving all their influence to sustain some form or other of empiricism. And there are now, also, many Paracelsuses in the world, men who know that they cannot by any means lead away the people so well as by pretensions they know to be false, and by calumnies too base to be uttered.

It is a dark feature in our profession, that it is so liable to be beset, and often, for a time, borne down, by arts and tricks addressed to the credulity and weakness of the people. It is humiliating to think that even learning, intelligence, and a certain kind of refinement, do often go hand in hand with much of the empiricism of our day. It is not ignorance that affords the greatest field for the dissemination of quackery—but wherever it does prevail, we are always sure to find a want of principle—a want of genuine integrity. It is always safe to calculate that that man or woman who has become a partisan of any of the various forms of quackery, is not quite right in appreciation of truth, or in moral judgment. I say this with the more confidence, because I sincerely believe that we need nothing more than *common sense* to direct us in the true path, to save us from all the devious windings, crooked aberrations, and absurd conclusions of the whole host of medical pretenders. Let us see to it, that we stand firmly on the teachings of science, and implicitly follow the direction of common sense, and we need never be led astray with any pretension, however plausible, or any false doctrines, however captivating in their appearance.



The Wretched Sanitary Condition of the English Army in the Crimea.

The fact has long been well known that during a protracted campaign in a foreign country, more soldiers perish from disease and privation than from the weapons of the enemy ; and it is merely a common-sense remark, that a sick soldier is not only useless, but also an incumbrance to the movements and operations of an army. The efficiency of an army also depends very much upon physiological conditions of its individual components, which, to the non-medical observer, may appear of slight importance. No man is so courageous after long fasting as after a satisfactory dinner ; though it is true that starvation may make one desperate. In order to fight well, equally as in order to work well in any other capacity, one must *feel* well in

all respects ; if merely chilled, or suffering from a slight degree of physical pain, his energy, either offensive or defensive, is in some degree diminished. For the soldier is human, though engaged in an inhuman occupation ; and like the mechanic, or any other laborer, he must be sustained by proper food and clothing, by sleep, and appropriate seasons of rest. Thus alone can the physical strength required in the struggles of the battle-field be acquired and maintained ; thus alone secured that cheerful state of mind and self-reliance which insures victory over superior force.

We repeat, then, that the greatest possible efficiency of an army can be secured only by securing its health and physical comfort in the greatest possible degree. It is difficult enough ordinarily to make an army *comfortable*, according to our ordinary notions of the meaning of that word, and especially during a prolonged march or a siege. But by prudent arrangements much can be accomplished to prevent or to diminish the privations and discomforts of the soldier's life, and thus to secure to him some degree of comparative comfort at least.

Military hygiene is therefore a subject of the highest importance to an army, and to the nation which employs it. It is also a department of military science whose principles are in many respects already well established. It includes all the means to be adopted for the *prevention of disease* in an army, such as the location of camps, in respect to water, ventilation, &c. ; the kind and amount of food for subsistence ; the proper kind of clothing ; the proper amount of labor and rest, in marching or in camp duty, so far as this can be controlled in the varying circumstances ; and many other particulars not necessary to mention here. Military hygiene is, in fact, the application of the laws of physiology to military life.

But military hygiene respects not merely the human life of an army. The life and health—or the working condition—of the lower animals, employed for draught, or in the cavalry, is a matter of the utmost importance ; and especially is this the case during a foreign campaign, from the great difficulty in supplying losses. Emergencies may arise in which Richard's exclamation,

“ A horse a horse ! my kingdom for a horse ! ”

hardly exaggerate the value of a single animal of the species. Under this department of the general subject, those of forage, shelter, &c., are included.

Now, in regard to all these subjects, certain principles are well established ; and the practical application of which, under all ordinary circumstances, can be foreseen and provided for. We have admitted that all the comforts of a camp at a distance from the enemy, cannot be enjoyed during a siege ; and the necessity of a forced march may set at defiance, for the time being, all established rules in this respect. But even the necessary privations of a siege may generally be estimated beforehand, with tolerable accuracy ; and much may, and should always be, done to alleviate them.

The location and construction of hospitals is rather a department of military *medicine*, a term not in use, but far better, as expressive of the whole duty of the army medical man than “military surgery.” For the army physician does far better service to his country in restoring to health the thousands who are prostrated by fever, and thus again rendering them its efficient defenders, than in amputating the shattered limbs of those mangled, though not quite fatally, in battle. Moreover, his duties as a mere surgeon are mostly associated with the results of a battle only ; while his other duties, as a physician merely, are ever weighing upon him, from day to day. It is as a physician, therefore, rather than as a surgeon, that he is so invaluable to an army ; and in his double capacity of physician and hygienist, the medical man may sometimes truly become even more valuable than a whole army to his country, as the first of Greek poets regarded him—

“ A skilful leech,* prepared our wounds to heal,
Is more than armies to the public weal.”

These remarks are suggested by the accounts recently received of the sufferings of the English army in the Crimea ; and which clearly result, in a great degree, from a neglect of the well-established principles of military hygiene.

Nor did this neglect commence in the Crimea. During the three inglorious months spent by the allied armies in total inac-

* An obsolete term for physician.

tivity at Scutari, 10,000 men are said to have died of cholera ; and in connection with this fact, we are also told that the camp was situated on low ground, and surrounded by the rankest vegetation, and that the soldiers were allowed to take such vegetables, and in such quantity, as they chose.

But when it was at last decided to drop all "timid counsels," and go to the Crimea, the facts as to the peculiarities of climate, at least, which were there to be encountered, we should have supposed would have been taken into account in the very outset; and that they were not considered, and suitably guarded against, has excited general astonishment. We may be told that the allied armies expected to take Sebastopol at once, and then consult their comfort at their leisure. This indeed may be a reason for the neglect ; but surely it is no excuse for it. It was already past the middle of October when the firing upon Sebastopol* commenced; and at any rate, cold weather must come on, and the almost incessant rains, before the city would probably capitulate. And if the siege *should* be indefinitely prolonged, as has proved to be the case, what would shortly become the sanitary condition of the besiegers, is a question which, we should suppose, would have occurred during the prolonged deliberations at Scutari.

It is accurate enough for present purposes to say that the peninsula of the Crimea lies between the latitudes of 44 deg. and 46½ deg. ; and in respect to its latitude, as well as in its peninsular situation, and its extent of territory, corresponds very nearly with the northern half of the State of Michigan. Sebastopol being at its southern extremity, corresponds very nearly, in respect to latitude, with Portland in Maine, and Toronto in Canada ; being also about 100 miles farther north than Detroit. We are very well aware that localities on the Continent have a higher medium temperature than those of corresponding latitudes on this side of the Atlantic. Still, according to Professor Dove of Berlin, the lowest mean annual temperature at Sebastopol, in January (the coldest month), is

* The allies landed in the Crimea on the 14th of September ; the battle of the Alma was on the 20th ; and the firing upon Sebastopol commenced on the 17th of October. The battle of Inkermann occurred on the 5th of November.

34 deg. 28 min. ;* this being 1 deg. 16 min. colder than in Paris, and 3 deg. 7 min. colder than in London. The Black Sea also, which surrounds the peninsula for three-fourths of its circumference—the other fourth, except the Isthmus of Perekop, being completed by the Sea of Azof—takes its very name from the fact that its waters are darkened by almost incessant storms during the colder portion of the year. The diary for the month of November last shows but *ten fair days* ; while rain fell sometime in the twenty-four hours in *eighteen* of the remaining twenty days, and the remaining two were cloudy. Fogs were also frequent on the mornings of the fair days ; and on the 14th November, four inches of snow fell on the heights in rear of Sebastopol. The 15th was, however, very mild and pleasant. High winds accompanied the rain, and continued often during the fair days.

Here we see a state of weather which, by its changeableness, together with its severity—and the latter alone is not slight for the month of November—demands the utmost precautions in order to protect the health of foreign troops against its influences.

Now all these facts, and others we cannot stay to specify, might have been known in England when the expedition to the Crimea was planned ; and the best apology that can be offered if they were not known by the proper authorities, is, to say they neglected to obtain information on the subject. But if not in England, certainly in Constantinople some one could have been found—not a Turk of course—who could have given some definite account of a locality not so far distant from Constantinople by 100 miles as is Cincinnati from this city.† Indeed we are driven to the conclusion that all this *was* well known, and seasonably known ; and that, as a correspondent of the London Times has remarked of other mismanagement in connection with this expedition, “ every fact which is now known, was known beforehand, and every mishap which is now known to have been capable of prevention was previously and season-

* The mean temperature in this city, in January, is 31 deg. ; or 3 deg. 28 min. colder, according to the City Inspector's Report for 1853.

† According to the maps, Sebastopol is less than 500 miles from Constantinople, less than 450 from Varna, and about 75 from Eupatoria.

ably known to be capable of being prevented by appropriate arrangements for that object."

It was not therefore a want of knowledge, but a neglect of administrative duty, which has led to no small part of the sufferings of the English army in the Crimea. It is not necessary for us to inquire who are the parties guilty of this neglect. It is enough to say that, with the name of Guthrie and his comrades in the Peninsular war, so familiar to us, to suppose the British army-surgeons at the present time to be so deficient in either skill or energy, would be to admit a degree of degeneracy which the lapse of only forty years cannot account for. We believe the medical staff of the English army before Sebastopol have done their duty as nobly as the circumstances in which they have been placed by the defective administration of the other departments of the service, rendered possible. Their means have been crippled, and their numbers never sufficiently large; but for neither of these defects have they been themselves responsible. They cannot *procure* provisions for the army, though they may indicate its necessity, and the proper diet. They cannot themselves obtain even medicines and hospital arrangements from home, though they must fail to save the lives of the sick without them.

We may be perhaps here reminded that supplies on their way to the Crimea were lost in the Black Sea by the wreck of the transports containing them; and that among these supplies were 40,000 overcoats for the soldiers. We reply that these garments ought to have arrived in the Crimea several weeks previously, and before the stormy season, therefore, had commenced; in which case, the probability of their having been lost at all would have been greatly diminished. Hundreds had already perished directly or indirectly from exposure to the weather, before these garments would have reached their destination, if they had not been lost. The storm, therefore, accounts for their loss; but there is no excuse, so far as we can see, for the delay in shipping them. Moreover, it has recently been ascertained that these coats were not, in fact, after all, specially adapted to the condition of a Crimean winter, but were merely a part of the ordinary soldier's outfit.

But what has been the actual experience in the meantime of

the soldiers in the Crimea? We will not speak particularly of the hardships incurred in and immediately after the battle of the Alma, and that of Inkermann—the fiercest in the records of modern warfare—but will confine ourselves to the accounts more recently received of the condition of the army before Sebastopol.

From a medical officer's report, dated December 2d, we learn that the snow storm on the 14th November, before alluded to, prostrated the tents and the hospital marquès, and thus directly exposed the patients to the inclemency of the weather. The dysentery had greatly increased during November; since the men had to lie, sometimes, in the trenches *twenty-four hours at a time* in the same position, and that a constrained one—being exposed to heavy dews at night, and often to drenching showers. This duty was, also, almost constantly recurring, without intervals of rest.

Since the storm, and the consequent additional exposures of the sick and the rest of the army, sickness has made a rapid and alarming progress.

The great coats of the men were threadbare and worn out, and the remainder of their apparel in a still worse condition. They had no change of clothing; and when they returned from the trenches to the camp at night, they slept without any covering except one wet blanket—the floor of the tent meanwhile being almost as wet as the ground outside.

And yet we are told by another writer that there was timber enough floating in the bay, for several days, after a violent storm, to have made huts for the whole army!! But it was not secured at the time; and at last it went out to sea again. By this time, probably, timber for that purpose has arrived by ships at Balaklava.

Fuel also could hardly be obtained, even for cooking, except a few green twigs gathered in the ravines. Cooking utensils were also very rare.

And yet the coffee sent to the army was in its *natural state*, i. e. not roasted, and of course not ground. The soldiers, of course, therefore, had these two operations to perform. And in accomplishing this object, they spoiled their mess tins, the tops of which they used for roasting; and also spoiled the

coffee itself, in attempting to grind it between two stones.

The hospitals were not provided with bedding, blankets, proper cooking utensils, or fuel; which state of things necessarily added largely to the amount of mortality. One physician states also that he cannot obtain any laudanum for the sick! "And unless the troops could be soon huddled," the writer continues, "and provided with warm clothing and fuel, the consequences will be most melancholy, and the exertions of the medical officers of little avail."

And yet Constantinople and Varna are within forty-eight hours' sail of Sebastopol!! Why, therefore, were not the warm clothing and the needed utensils promptly obtained, and supplied within a single week to the suffering soldiers?

But another privation to be mentioned also, is the scarcity of provisions. The men were reduced, at the last accounts, to merely half a pound of meat and biscuit a day, without rice; and this because the roads were so bad that provisions could not be brought up from Balaklava, only four or five miles distant from Sebastopol!!

Why was not a passable road *seasonably made*?

Of the small amount of provisions actually brought up, some was carried on the backs of men; and officers are frequently to be seen carrying articles for their own consumption, on foot, and through the mud, from Balaklava to Sebastopol. Soldiers thus employed often fall exhausted by the way; and the poor draught horses were constantly dying in this service; for the latter, as well as the men, were both over-worked and under-fed. As each animal dies, its share of work of course falls upon its survivors. The arabas also were constantly getting broken, the mud being, much of the way, *ten inches deep*. "And yet I cannot hear," says a correspondent there of the London Daily News, "that measures have been taken to get up a fresh supply of draught cattle and waggons from Constantinople, Varna, and Eupatoria." Another writer says the scene on the road to Balaklava almost "defies description. Arabas broken down; mules toiling along and slipping down; others down, and not the least chance of their ever rising again, &c. The horses of the artillery are so dreadfully weather-beaten, that they die

two and three of a night in many divisions ; and those of the cavalry are wretched ghosts of what they were—drawn up in the belly and straight as a match, and standing in mud a foot deep.”

And yet we are also told that after the wreck of the transports an immense number of packages of pressed hay floated into the bay and upon the shore. Its compressed state prevented its being saturated with water. This was, however, not secured for several days, and at length it floated out to sea again.

The personal appearance of the soldiers may be gathered from the following somewhat humorous description of a *specimen* : “Think not that a regiment in the Crimea is at all like a regiment at Portsmouth—very far from it. At home, all is neat and clean as a pin ; here, dress is of the roughest kind. Who is this now passing ? Surely he must be some stranger from the wilds of Tartary. No ; he is one of this now-renowned army. Upon his head, instead of a shako, he has placed the comfortable lamb-skin cap of the country, taken from some terrified Crim ; on his back is the cloak of a Russian, not much the better for mud and dirt ; around his legs are skins, or stout rags, as the case may be, tied on with spun-yarn, or a piece of rope picked up from a rubbish-heap ; his shoes, and far above his ankles, are covered with thick mud ; in his mouth is a short clay-pipe, the campaigner’s dearest friend ; and he marches along with the air of a hero, with his nod for this comrade, and, a word for that, apparently as contented, if not so clean, as when walking in fullfig down the streets of dear old England.”

By a letter dated December 4, we learn, that owing to a want of hospital marquèes, “five men of the battalion of the Guards were found dead outside of one of the tents, within the last thirty hours ;” and that the mortality among the Turks had assumed “all the dimensions of a plague.” It was also added, that a vast number of heavy guns, and an immense quantity of shot, shell, and powder were being landed on the beach—we trust there was also some *laudanum* on board—but with no present prospect of being moved to the place where they were required. The Russians were still constantly mak-

ing sorties by day, and creating alarms by night, so that the English were worn out by constant fatigue and loss of sleep.

The London *Times* of December 28, states that the regiments just arrived from "Gibraltar, Malta, and Corfu, and even the fifty strong, healthy policemen sent from London, sicken and die, where they have to live, to work, to walk, to sit, to eat and drink, and sleep; in wet clothes and wet boots, under wet tents, on the wet ground, in watery trenches, under rainy skies. The human frame was not made for this sort of work; and since the work has doubled, the food been reduced to half-rations, and the tents been blown away, the pest has stalked triumphantly through the army." The whole army eagerly desire to assault the city, if only to "*put an end to their own misery*;" the present being "a state of things which costs us every week as much death and sickness as a pitched battle, without the glory, and still more, without any result." It also adds the opinion, that, were the immediate capture of the place to cost 10,000 men in killed and wounded, three months' longer continuance of the present state of things will cost quite that number, and leave the work still to be done; for though the English nation is the richest, as well as the most ingenious people in the world, "we have really shown no more artifice or skill in the siege of Sebastopol than our ancestors would have done 2,000 years ago."

So far as the hygiene and medical arrangements are concerned, we shall not now be expected to controvert this last opinion.

But we will no longer contemplate this gloomy subject. At last the report reaches us, that the materials for a railroad from Balaklava to Sebastopol are on the way to the Crimea; and a warmer sensation comes over us as we read that orders for clothing have actually been forwarded to Constantinople, and that several thousands of buffalo skins are on their way from Canada. We hope the poor soldiers have, ere now, felt the luxury again of a comfortable suit of clothes.

Nor will we contrast with the English army the French army before Sebastopol. Such a comparison might seem unkind, since, according to the accounts of even English correspondents, the condition of the French army is vastly superior

in all the respects under present consideration. The *Times*, before quoted, says : " The French surpass us in their roads, in their port, in their huts, in their food and clothing, in their hospitals, in everything, and are beginning to look on our helplessness much as we look on that of our barbarous allies." It even accords to the Russians a superiority to the French and English both in everything, except in mere physical strength and courage. In this the English " come off the best." But the Russians are at home.

With a mere glance at the habits and dress of the Russian soldiers, as derived from an English paper, we now conclude.

" It is believed that the Russian soldiers had been liberally supplied with liquor previous to the attack of the 5th November (the battle of Inkermann). Their continued and loud shouting, and the impetuosity of their attack, render it probable that they were under the influence of some artificial stimulant of the sort. In the canteens, also, of many of the killed on the field was found a mixture of raki and water. The men who have fallen into our hands, though generally of short stature, are of sturdy frames, with broad chests and well-developed muscular legs. Their clothing is well made and warm, and though coarse in texture, an amply sufficient protection against the weather. The voluminous folds of their great coats, the sleeves of which are doubled back nearly as far as the elbows, while the skirts descended to the ankles, throw the ' skimping ' ordinance great coats issued to our troops completely in the shade as regards comfort and warmth. To prevent the length of the coat inconveniencing the wearer when walking, the skirt all round is made by a very simple contrivance to loop up above the knees. So also the coat can be worn loose, like a cloak, or drawn in at the waist. The men carry with them mittens of thick black cloth, the four fingers being together in one, the thumb in another division of the glove."

In conclusion, we hope we have not spoken too lightly in any respect of the privations of the English army in the Crimea ; for, if we mistake not, it is our sympathy with the soldiers, *as men*, which has prompted the preceding remarks. For expressions of sympathy with the Allies as such, or with the Czar, this is not the appropriate channel ; nor is it any part of

our office to denounce the authorities through whose negligence the state of things above described has been mainly brought about. It is for Englishmen to express their chagrin, and their indignation also, if moved to do so; and for Lord John Russell in particular, to explain everything away to the nation's satisfaction, if he may. It is our function merely to record the facts and their causes, so far as we may, and to vindicate the medical profession so far as the facts enable us to do so. It is perhaps allowable that we should also express our astonishment; but the facts will, at all events, stand here for reference in future time, should our readers or our Government be in circumstances to profit by such information.

Since writing the preceding pages, we learn that a whole cargo of hard-baked plum puddings was sent from England to the Crimea, in season, it was hoped, for a Christmas dinner for the English troops. As this article of diet never goes amiss with an English stomach, we trust the cargo diffused a general satisfaction on that occasion—*provided always* that it was found practicable to transport the puddings over the last five miles of the distance from England to the troops—from Balaklava to Sebastopol!

E. R. P.



On the Retention of the Placenta within the Vagina. By EDWARD H. PARKER, M. D., Prof. of Physiology and Pathology in the New York Medical College.

The least difficulty which stands in the way of the ready and complete delivery of the foetus and its appendages is worthy of observation and comment. With this idea I propose to devote a limited space to what I have several times seen magnified into a supposed serious complication of labor.

The placenta, with its attached membranes, being contained as a foreign body within the uterus, is to be expelled, when the fit time arrives, in precisely the same way as any other substance; that is, by the force of the muscular tissue of that organ contracting behind it and driving it out of its mouth. Under ordinary circumstances, almost with this expulsion,

there takes place complete extrusion from the vagina, requiring at most for its aid very moderate traction upon the cord.

Occasionally, however, the process does not go on so completely or rapidly. Not only does the placenta remain, notwithstanding more than moderate traction of the cord is used, but to beginners in midwifery practice it is a complete puzzle how to extract it. It is more especially for this class that the following description of the cause of, and remedy for, this difficulty is given. And if I shall succeed in enabling any young practitioner to avoid the fear and dismay caused by his supposed encounter with a placenta retained in or adherent to the uterus, my purpose will be accomplished. The fact that it has occurred to me several times to be called to relieve the lesser difficulty, when the greater has been supposed to exist, suggests these remarks.

In order that decided and firm retention of the placenta in the vagina should take place, the placenta itself must furnish three conditions, namely, it must be of larger size, full of blood, and the cord must be attached at or near to its centre. Supposing these conditions to exist, the placenta in the majority of cases is expelled from the uterus with the surface which was next the child, in advance. As soon as it had been driven from the uterus by the muscular power of the organ, it comes into the more capacious and distensible vagina, and at once endeavors to assume its natural flatness. Its edges expand beyond the neck of the uterus, and overlap it on all sides, its middle being nearly if not exactly over the os uteri. If in this condition of things the attempt be made, by traction on the cord, to deliver the placenta, it will be found that the origin of the cord, even when most firmly attached, can be pulled off; this requiring perhaps the exercise of a decided amount of strength, and giving pain to the patient sufficient to produce violent outcries. What now is the cause of these phenomena? Undoubtedly the expansion of the placenta in the vagina serves in part to account for the difficulty. This is slight, however, and of itself would not create the whole of it. The position of the cord is a more potent cause, for this is situated in the centre of the placenta, and when traction is made upon it, the placenta thus drawn down by its middle, and distended with blood, presents

in its edges folded together a mass of larger diameter than the foetal head. But the chief cause is that by the expansion of the placenta, immediately after its escape from the uterus; it happens that it is fitted about the neck of the uterus so as to be almost air tight, thus presenting an arrangement which may be best compared to the disk of moist leather with a string attached to its centre which boys amuse themselves with. This being thoroughly pressed down upon a smooth surface, so as to drive out all the air beneath it, cannot be pulled off by means of the string without the exertion of a large amount of force. Atmospheric pressure is the effective cause of the retention of the disk of leather, and of the placenta—each in its place.

The remedy for this state of things is very simple. The finger, following up the cord made slightly tense, should be carried to the edge of the placenta, and then bent so as to pass between it and the uterus. Air will thus enter between the surfaces, and the greatest difficulty, the atmospheric pressure will be removed. A very slight force now will be sufficient to bring down the edge, when the placenta rolls itself up, and the other two difficulties being removed, it readily escapes from the vagina. It will now be evident why the three conditions of the placenta, of which mention was made, are necessary to produce this complication. A small flaccid placenta cannot thus expand while the insertion of the cord upon a side of the disk causes an edge to be lifted when traction is made, and air thus enters behind the placenta.

The conditions with which this is confounded are usually that of *uterine* retention of the placenta—or adherent placenta. The distinguishing features of these need not be dwelt upon, and a mistake can hardly be committed if the examination is conducted with coolness and care. The shape of the uterus, as ascertained by external pressure on the abdomen, together with the os uteri contracting about the cord, should be borne in mind as diagnostic marks distinguishing it from uterine retention. With adherent placenta it can only be confounded by neglect to carry the finger to the edge of the placenta, or by accidentally tearing it at some point, under the supposition that the placenta is being torn from the surface of the uterus.

PART II.—REVIEWS AND BIBLIOGRAPHY.

“Nullius addictus jurare in verba magistri.”

Diseases and Injuries of Seamen, with Remarks on their Enlistment, Naval Hygiene, and Duties of Medical Officers. By G. R. B. HORNER, M. D., Surgeon U. S. N., &c., &c. Phila.: Lippincott, Grambo & Co. 1854. pp. 252.

The contents of this little work include, among other topics, excellent chapters on the duties of medical officers, their enlistment, and the examination of recruits, naval hygiene, diseases of seamen and treatment, injuries of seamen and their treatment. The chapter on hygiene is full of valuable suggestions of a highly practical nature as to the proper construction of vessels for the health of crews, the necessity of ventilation, the uses of a dispensary for patients, its proper locality in the vessel, the frequent use of cold water both purificatory and tonic, and the best methods of preserving provisions. Among the diseases of seamen, Dr. Horner has found abscesses, varying from the smallest boil in intensity to the most aggravated phlegmon, sometimes partaking of a carbuncular character, to be some of the most common complaints to which sailors are liable. Of the cutaneous diseases are mentioned scabies, herpes, impetigo, acne, and urticaria. Between the tropics the miliaria occurred frequently, scarlatina north of them, and variola in every climate. Pemphigus rarely occurred; cases of measles were seen only on one ship. Of scabies every grade was encountered. Scarlatina was seldom met with, and always in the U. S. during the winter, and on the eve of the vessel's departure. Sailors suffer much, as would be expected, from affections of the respiratory organs, notwithstanding the strict examination before admission on ship-board. This comes of their great exposures to all vicissitudes of weather, their almost constant contact with strong, damp currents of air. These diseases generally commence with catarrh, which, unattended to, rapidly passes to the chronic form, and terminates in organic lesions of a serious nature. Dr. Horner has given details of some interesting autopsiæ of patients who died of tubercular disease. Among diseases of the abdomen, those of the digestive organs are most frequent among seamen, though confirmed dyspepsia is much less common than that temporary form induced by excesses. In the treatment of diarrhœa, Dr. Horner

has employed the sulphate of zinc with the most successful results ; united with anodyne enemata to remove the ulceration and inflammation of the rectum, or given by the mouth to act on the upper portions of the bowels and invigorate the whole system by its tonic power. He even prefers sulphate of zinc to the nitrate of silver, and thinks its action on mucous membranes is of a much less irritating character. In the treatment of scurvy, the proverbial affection of seamen, the most efficient treatment consisted of a vegetable diet, pure air, clean beds, moderate exercise, friction with sulphur ointment, vol. liniments, warm pediluvia, lotions, and anodynes, when indicated. Seamen, from their hardy lives, are rarely affected with diseases of the nervous system, save those of a neuralgic character. The injuries of sailors, the most frequent of which are contused wounds of every description, have a liberal share of notice in Dr. Horner's book, and are treated apparently according to the most approved surgical means. Sailors are more subject to hernia than any other class of men save caulkers. Dr. H. treated such cases by confinement in the horizontal position, returning the contents of the sac to the abdominal cavity, and retaining them by the careful apposition of a hard truss, keeping patient on low diet, and frequently relieving the bowels of their contents by gentle purgatives. He asserts that, by such means, he has been able to effect numerous cures of rupture and obviate the necessity of a discharge of the sailors. We can only give a limited *resumé* of the contents of this excellent book. Its author has had a naval practice of twenty-eight years, thirteen of which were spent in our national ships and at various foreign stations. To such ample experience he has added excellent judgment in the choice, arrangement, and treatment of the various subjects introduced. Physicians in naval practice will find it a desirable acquisition to their libraries, and those who have no naval experience, or who are merely thinking of going to sea, will find it a "vade mecum," and well adapted to give them all necessary information. Abating the number of uncorrected errata, the typography and general execution of the book are respectable. Dr. Horner has dedicated his book to Dr. Samuel Jackson, the veteran Professor of the Pennsylvania University.

F. A. S.

The Transactions of the American Medical Association. Vol. VII.
1854. pp. 661.

THIS volume differs from its predecessors in several respects. In the place of its publication, it is from New York instead of Philadelphia ; it is bound instead of being done up like a mammoth pamphlet ; it is issued in some kind of season, though delayed by authors more than it should have been ; and last, though not least, it is not filled with lithographs got up by the Association for individual benefit, and representing various drusy appearances, sketched by the aid of a fertile imagination. That a copy of these Transactions should be sent to a journal out of Philadelphia at least, is, so far as we know, unexampled, though we hope it may be regarded as a precedent for future use.

Looking at the volume as a whole, we see no evidence that a book cannot be printed in New York as well as elsewhere ; and though we wish the committee had taken sufficient liberty with the manuscripts of authors to set their badly-written prescriptions right, we must commend their diligence and success. We can now only add a list of contents, hoping at another day to refer to some of the papers again.

After the minutes is the Vice-President's Address, by Dr. Parsons of Providence, R. I. ; a Report of the Committee on Medical Education, by Dr. Cabell of Virginia, follows. Then Reports on the Epidemics of Kentucky and Tennessee ; on Erysipelas ; on the Cryptogamic Plants of the United States ; on the Epidemics of Ohio, Indiana, and Michigan ; on those of Louisiana, Mississippi, Arkansas, and Texas ; the Prize Essay, by Dr. Brainard ; Report on the Norwalk disaster ; Remarks on Yellow Fever ; Reports of the Committee of Publication ; ditto of the Treasurer ; Catalogues and Indices.

PART III.—PROCEEDINGS OF SOCIETIES.

NEW YORK PATHOLOGICAL SOCIETY.

Dec. 13. *Dr. Sayre* exhibited, for *Dr. Murdock*, a mass of inspissated mucus, of the size of a small filbert, which had threatened suffocation to a child of 14 months, for the relief of which tracheotomy had been performed. The accretion was removed, but the child died in a few hours. On examination (post mortem), both lungs, with the

exception of the middle lobe of the right, presented the appearance of pneumonia in the second stage, probably caused by the congestion dependant on the imperfect aëration of the blood. No foreign body was found in the larynx, trachea or bronchi.

Dr. Finnell exhibited the femoral artery of a man, with the following history. Six weeks before death, a swelling was noticed at the inner portion of the thigh, the pain of which caused him to take his bed at the end of a week. The swelling increasing, the surgeon in attendance made a deep incision into the tumor, but no pus escaped, and the swelling rather increased. There was, however, a good deal of hæmorrhage. In consultation, the swelling was pronounced a malignant fungoid tumor, and amputation was recommended. Consent, however, could not be obtained. The next day the femoral artery was tied, which checked the hæmorrhage, and the size of the limb diminished, until, on the third day afterwards, it was nearly of the natural size. The patient became pale and exhausted, with the pulse at 130 per minute. The sac suppurated freely, and three weeks after the operation the patient died. The autopsy showed the lower third of the femur bare. It was evident that the periostitis of commencing necrosis had caused the pain and the first swelling. The incision had cut a branch of the femoral artery, and the effusion of blood into the cellular tissue caused an increase of swelling.

Dr. Enmet exhibited a remarkably large specimen of calcification on the surface of the pericardium. The patient, æt. 19, died at Ward's Island Hospital, of congestion of the lungs. There had not been any interruption of the circulation; the sounds of the heart were very clear, and at the autopsy the valves were found healthy. The liver was fatty and enlarged, weighing eight pounds. The spleen was enlarged, and there were signs of old peritonitis.

Dr. Clark had not seen so extensive a deposit of calcification. These deposits do not occur, except in the substance of the heart, unless as a result of pericarditis. He had seen two instances of the deposit of foreign matter, so called, in the muscular tissue of the heart, but it could not be distinguished in the living patient, so far as he was aware, nor can we tell under what circumstances effused products of inflammation become calcified.

Dr. Metcalfe had seen a patch of calcification on the external surface of the pericardium, $2\frac{1}{2}$ inches long, $1\frac{1}{2}$ wide. There had been pericarditis.

Dr. Enos exhibited a specimen of encephaloid disease of the liver, taken from a woman 67 years of age. The patient had been in com-

parative health, but rather feeble, till about six months previous to her death. She had then some symptoms of indigestion, which were not surprising, as she was nearly toothless. Gradually, however, her symptoms become more aggravated, and not referable to the stomach merely. Pain in the epigastric and hypochondriac regions became more frequent and severe. The liver became enlarged, very tender, and nodulated, which, together with the duration of the disease, led him to infer the existence of malignant disease. During the last month of her illness there was painful and difficult deglutition. Her evacuations were scanty, tarry, and sometimes purulent towards the close of her life. During the last week, her extremities were œdematous, but there was no ascites. The lower extremity of the œsophagus, the cardiac end of the stomach, and the spleen, were involved in the cancerous difficulty, were soft, ulcerated, dark, and easily broken down. The disease was hereditary.

Dr. E. also exhibited a fibrous polypus, taken from a boy æt. 13. It occupied the posterior nares, being attached to the superior turbinated bone of the right side. It was of a pyriform shape, about three inches in length, when first removed, and from an inch and a half to two inches through the fundus. It closely filled both posterior nares, so that it was difficult to introduce a bougie through the nostril on either side. It was strangulated by means of a silver wire and double screw canula. The wire was doubled, and introduced through the nostril in a gum elastic bougie, and brought out of the mouth; the end of the bougie was then cut off, and it was withdrawn, leaving the wire in; the loop was then carried, with the finger around the tumor, as high upon the pedicle as possible. The canula was run into the nostril on the wires, and secured in the usual manner. The screw was tightened from day to day, and on the fifth day the canula and wire came away, leaving the tumor in situ—it being so long that it had to be removed by a tenaculum.

Dr. Markoe exhibited a tibia affected with phagadenic ulcer, of which the following is the history. A man, æt. 32, of healthy appearance, was admitted to the New York Hospital, Sept. 10th, 1854, with a large ulcer on the shin, connected with enlargement of the tibia. It was first caused by an injury twenty years before; a heavy piece of machinery falling upon his leg, inflicting a lacerated and contused wound. It had never healed perfectly. During most of the time it had been a small ulcer, which gave no trouble; but at several periods, from causes not evident, it had enlarged and become

very painful, with prominent granulations, which at times have bleed freely. The last of these attacks, under which he is now suffering, commenced about twelve weeks ago. No bone has ever been discharged. He has never had syphilis. The ulcer, on his admission, was on the middle of the front of the leg—the bones above and below being much enlarged. The surface of the ulcer, nearly the size of the palm of the hand, was irregular, prominent, formed by large wart-like granulations, giving issue to a thin, fetid, watery fluid. The probe, on being passed down among the granulations, entered several points half an inch into the substance of the tibia, and encountered rough spiculæ, particularly around the margin of the sore, where there seemed to be a border of sharp ulcerated bone. No great tenderness or inflammatory appearance round the sore. Several severe hemorrhages had occurred, and he suffered a great deal of pain. Finding no improvement, Dr. Buck, on the 23d of September, cut down and exposed the tibia, and found that the wart-like granulations did spring from a true ulcer of the bone, which was hypertrophied above and below. By a chisel, the whole ulcerated portion was removed, down to what seemed to be healthy, but hypertrophied tissue. This made an excavation half an inch deep, opening at one point into the medullary cavity. It was dressed lightly, and allowed to granulate. No relief from pain followed the operation. The wound did not assume a healthy action, but produced anew the large, unhealthy, wart-like granulations, bleeding freely from slight causes. Several large pieces of bone came away, and the ulcerative actions seemed to be progressive in the centre of the sore. His general condition was failing, and, at his own request, the limb was amputated just below the knee. His recovery was good. On examination, the specimen shows the lower two-thirds of both bones much hypertrophied. At the point of the ulcer there is a loss of substance of the tibia, equal to one-third of its diameter. The excavation is covered and partly filled up with cauliflower-looking granulations, containing no bone. The bony structure seems irregularly excavated, and worm-eaten. The posterior surface of the bone shows that diseased action was penetrating through the whole structure. It is prominent with irregular nodulated deposits of new bone, and the substance of the tibia looks as if it were infiltrated with the same material as that composing the granulations. The same encephaloid-looking matter appeared to form the substance of the skin granulations, and was in several places infiltrated into the muscles. Examination under the microscope gives equivocal evidence of malignancy.

Dr. Clark inquired if there was any organic disease in which nodulations of any considerable size existed, except cancer? He thinks these characteristic of cancer.

Dr. W. Parker gave the history of two cases of chronic disease of the bladder. The first occurred in the person of a gentleman, æt. 57, who for many years, up to February, 1854, had enjoyed average good health: his appetite was good. He complained of pain in the loins and around the crista ilii. His urine was normal in quantity, of acid re-action, and presented a slight sediment, though clear. The sediment consisted of blood corpuscles, and epithelial scales, with small masses of albumen. Diuretics and dry cupping to the loins were recommended, after the employment of which the blood disappeared from the urine. Travel was now recommended; and in August the patient returned home improved. He resumed the duties of his profession, but soon became worse, exhibited great anxiety, and lost his sight; which condition continued until near death.

Dr. Buck saw this patient three weeks before his death. He passed his urine frequently, with much pain at the end of the act. There was nervous irritability, but no fever or heat of the skin. The urine, which was sufficient in quantity, was of a turbid, claret hue, in which were small, leech-shaped, black clots. On the side of the vessel was a layer of bright, coagulated blood. There was moderate sensibility above the pubes. Pain was referred to the course of the left ureter; the prostatic portion of the bladder was more resisting than usual. The patient seemed otherwise to be in good health; appetite good, and no anasarca. Styptic remedies to arrest hæmorrhage seemed to be useless until the bladder was injected, with a solution of alum, three or four grains to the ounce of water. This moderated the hæmorrhage; and a few days after, a solution of ten grains to the ounce was injected with no ill effects. The patient soon grew worse. Intense pain was developed about the pubes, and in the region of the bladder. A fortnight before the patient's death, a medical friend of the family saw him, and pronounced the malady cystitis. Leeches were applied; and from this time the patient rapidly declined: he died in two weeks.

Post-mortem examination revealed a tumor above the pubes, extending nearly to the umbilicus. On opening the cavity of the abdomen, the walls of the bladder were found thickened and adherent to the walls of the abdomen. The organ was distended by ten or twelve ounces of old and somewhat bloody urine. In its *bas fond* was a fungoid ulcer five inches in diameter. The ureters were nor-

mal ; the capsule of the left kidney was thickened ; the cortical portion of that kidney was from half a line to one and a half in thickness. The pyramids were small ; the right kidney was enlarged, but not so far advanced in disease. Microscopical examination showed the disease of the bladder to be, unequivocally, cancer.

Dr. Parker's second patient was a gentleman, æt. 62, of regular habits and sanguine temperament ; his health had been uninterruptedly good. In February, 1854, he presented himself, having noticed slight vertigo. He had passed water too often for a year or two previously ; at a previous period, he had passed blood in his water for four months. Six months before the interview, the hæmorrhage from the bladder re-commenced, and continued until death. He soon passed water more frequently, accompanied by much bright blood. Palliative treatment only was employed, and the patient steadily declined.

Examination, *post-mortem*.—Kidneys and ureters threw no light on the symptoms. Above the urethral orifice of the bladder was a pediculated tumor, surrounded by warty growths ; at the fundus was a fungous growth—probably the source of the hæmorrhage—and an irregular patch of vegetation existed two inches from the prostate. On microscopical examination, *Dr. Clark* had been unable to determine with certainty the cancerous nature of the growths, as they seemed to be mostly epithelial.

Dr. Buck had recently seen two cases of hæmorrhage from the bladder much relieved by the injection of a solution of alum ; three or four grains to the ounce of water.

Dr. Peaslee remarked, that it would be very desirable, if possible, to decide as to the precise nature of the two cases under consideration ; and as the microscope had not, he thought, fully decided in respect to the last-mentioned case, it might be allowable to attempt such a decision by reasoning upon general grounds ; for if decided thus, the light afforded by these cases may be of great assistance to us, both in a diagnostic and therapeutic point of view, whenever other similar cases occur. Considering it evident that the first case (the one treated, in part, by *Dr. Buck*) was one of true encephaloid cancer, *Dr. P.* did not think it at all probable that the second was of the same nature ; or at least if so, that element in the case was not sufficiently advanced to produce the prominent symptoms, or demand any special therapeutical interferences. Admitting both to be merely encephaloid, the hæmorrhage in the latter case was out of all proportion to the possible amount of the disease, it being quite as abundant

as in the other case, where a large mass of this disease existed. In other words, we must look for another cause of an equally copious hæmorrhage where the same disease exists, if at all, in a proportionably very small degree ; and that other cause is at once suggested by the presence of the polypoid growth at the neck of the bladder, which Dr. Clark found not to be of malignant character. In favor also of the supposition, that this may have been the principal source of the hæmorrhage, we may cite the well-known effect of even a still smaller polypus in the uterus, in keeping up hæmorrhage. Dr. P., therefore, thought it quite probable that the main symptoms were produced by the polypoid growth ; even the malignant disease, to a slight amount, might also have existed in that case. But if this conclusion be correct, of what diagnostic value are these cases?—and can anything be learned from them for the relief of such cases? In answer to the first question, Dr. P. stated it as his belief, that if we could have two other cases precisely similar to these, the microscope alone would decide positively that the first *was* a case of encephaloid disease ; for if the peculiar cells were not spontaneously voided in the urine, they might be detached by an instrument introduced into the bladder, and such an exploration would be justifiable in all such cases. On the other hand, the microscope would probably not detect any evidence of cancerous disease, after such an exploration, in the second case ; and if *not*, then for all practical purposes it should be regarded, till further light is obtained, as a case, *not* of malignant character, but a polypoid growth. Excessive hæmorrhage, in the absence of the microscopical signs, would also confirm this idea.

But if the diagnosis may become thus definite, can any thing be done for the essential relief of such cases? Though this be entirely out of the question in a case like the first, Dr. P. did not think a case like the second entirely beyond relief ; and (in case no malignant disease existed) possibly it might be permanently relieved. The polypoid growth might be removed, with a probability of entirely checking the hæmorrhage, an operation which has not very unfrequently been performed in Paris.

Dr. Clark replied that he did not intend to express any doubt as to the malignant character of *one* of the portions of the second bladder, which he examined microscopically.

Dr. Peaslee thought, however, that little, if any part of the hemorrhage, could have proceeded from that part, it being of very slight extent, and therefore the treatment should be directed to the other element of the case.

Dr. Buck thought that, though the polypoid growth might be removed, the malignant disease would yet destroy the patient.

Dr. Peaslee thought the arrest of the hæmorrhage would be no small matter, even if there were no other disease ; especially since, in the second case, death had apparently been produced by the constant exhausting hæmorrhage—the cancerous affection not having been sufficiently advanced to produce fatal effects ; the patient's life might thus be prolonged, at any rate.

Dr. Dalton exhibited a specimen of internal strangulated hernia, for which he was indebted to Dr. H. W. Brown, and from whom he had received a statement of the previous history. The patient, a woman of 78 years of age, had suffered for three days, when seen by Dr. Brown, with all the symptoms of strangulated hernia, except stercoraceous vomiting, which was absent throughout. There was intense paroxysmal pain in the abdomen, with excessive tenderness, both more noticeable on the right side, as also was, in a less degree, the distension of the belly, which was very great ; there was obstinate constipation. In the right groin a tumor was found nearly the size of a pullet's egg, movable at its lower portion, free from tension, and which felt like omentum. Dr. Brown then performed the operation for strangulated hernia, with the advice and assistance of Drs. Buck, Watts, and Van Roth. On opening the hernial sac, a small quantity of glairy fluid escaped, but no intestine could be seen nor felt, nor even, after the incision was prolonged up to the internal ring, could the finger be passed into the abdominal cavity. The hernial sac was evidently an old one, whose neck had become obliterated by the adhesive inflammation excited by the truss at some former period when the intestines had been reduced, leaving the sac *in situ*.

As no indication for further proceedings existed, the wound was closed. Death ensued in twenty-four hours, and the autopsy revealed recent general peritonitis, with abundant evidences of a former attack. An internal strangulation of the small intestine was found, which Dr. Dalton showed to the Society. The strangulation was effected by a firm, round cord of adventitious membrane, evidently an old adhesion, extending from the free edge of the ilium, encircling the neck of the strangulated portion, and attached by its opposite extremity to a part of the mesentery in which were two calculous concretions apparently phlebolites. The strangulated portion was about eighteen inches in length, was deeply congested, and its folds adherent to each other by soft, recent exudation.

Dr. Dalton also exhibited a specimen of *filaria gracilis*, which he

had found recently in the posterior cavity of the peritoneum of a monkey. The parasite was lying perfectly free between the peritoneal layers of the great omentum. It was a female, $8\frac{1}{3}$ inches long, and $\frac{1}{100}$ of an inch in thickness; it had one external, cutaneous investment $\frac{1}{3000}$ of an inch thick, and finely striated transversely; a layer of sub-cutaneous longitudinal, unstriped muscular fibres, a straight intestine, and a double spirally-wound oviduct.

Dr. D. also showed a specimen of cataract from the dog. In this case, both eyes were equally affected. The opacity was confined to the external layers of the crystalline, and disposed in irregular streaks, like the veins in variegated marble. The microscope showed it to be owing to a deposit of a fatty granules and globules between the fibres of the lens.

Dr. Weber exhibited a tumor extirpated by him. It was a distinct specimen of medullary sarcoma.

December 27th *Dr. Clark* presented a specimen of blood from a patient who died of gangrene of the feet, nose, fingers, &c. The coloring matter seemed diffused through the whole mass, and not confined to the red corpuscles, which were very few and small; the lymph corpuscles were also few, but large. The following is the history of the case:

Louisa White, æt. 28 years, was admitted about three weeks since with a sore mouth, which she attributed to some pills administered by a physician. She also complained of great tenderness of the feet, which were blue and cold for about three inches above the ankle; her nose and fingers on the left hand were in the same condition. Afterwards the other hand and the ears became affected; and still later, the other parts. She died December 13th. *Post-mortem* examination showed all the organs healthy. The ilio-femoral, radial, tibial, and brachial arteries were examined, and found pervious and healthy.

Dr. Clark also presented a specimen of cancer of the cardia, of interest from the form of the growth, obstructing the passage of food, &c.

Dr. Peaslee thought this case very interesting from its completeness, and the satisfactory manner in which the *post-mortem* appearances explained the *præ-mortem* symptoms. Some of the latter, however, reminded him of a case of his, in which malignant disease was entirely out of the question. The patient was a medical pupil, 26 years of age, and perfectly well in every other respect, who, for three or four years previous, could not pass any solid food into his stomach

by ordinary acts of deglutition. It would apparently accumulate in the œsophagus, till six or eight ounces had thus been collected, when a sensation of great tension and distress would at once occur, and which would be promptly followed by the ejection of the food, unless large quantities of water (two or three tumbler-fulls) were swallowed with the utmost rapidity. In this way the food would be carried at once into the stomach, and instantaneous relief afforded. The difficulty had not increased, at the time alluded to, for the last two years, nor in the least respect about four years subsequent to that time. He is now a foreign missionary. Dr. Peaslee had supposed there must have been a dilatation of the œsophagus, which might have been produced by some valvular development of the cardia, though certainly not from malignant disease.

Dr. Willard Parker inquired if the œsophageal bougie had been used by way of exploration.

Dr. Peaslee said it had been by others before he saw the case, but without detecting any dilatation.

Dr. Parker asked if pouches in the œsophagus were common on record.

Dr. Peaslee said his attention was directed to that question at the time, but he could not find any case of the kind.

Dr. Post had seen a case of disease of the œsophagus, which was thought to be malignant, but which proved to be chronic abscess, as it afterwards burst and discharged itself, having existed some months.

Dr. Clark remarked that the difference between his and Dr. Peaslee's case was, the former was cachectic, the latter was generally healthy.

Dr. C. then exhibited a lung in which gangrene had taken place. The disease had gone on and successfully passed the crisis, when the patient died suddenly from pulmonary hæmorrhage. A large cavity was found in the lung, lined by a pyogenic membrane. Dr. C. remarked that they were able to assert the precise time the membrane was formed and commenced secreting pus. Dr. C. also presented a specimen of tubercular peritoneum without comment.

Dr. Batchelder asked how large a proportion of those affected with gangrene of the lung recovered.

Dr. Clark thought from one half to two in five.

Dr. Batchelder thought one half, and gave an account of a patient he had some thirty years since, somewhat similar to Dr. Clark's, his patient also died from pulmonary hæmorrhage.

Dr. C. thought in his case the gangrene was not preceded by in-

inflammation of the lung ; he also felt quite sure that this was never the case, but rather that the gangrene was the exciting cause of the accompanying pneumonia.

Dr. Parker thought this was contrary to the generally-received opinion.

Dr. Clark did not feel satisfied as to the reasons. He himself, with *Dr. Swett*, had investigated this subject, and found the result, as did *Dr. Carswell*, as he had just stated. *Dr. C.* remarked that there were other tissues which never became gangrenous in consequence of inflammation.

Dr. Batchelder also thought *Dr. C.*'s opinion correct, and that the inflammation was an effort at reparation. *Dr. C.* thought the inflammation the result of irritation.

Dr. Peaslee would receive the proposition, that inflammation of the lung never produces gangrene of its substance, with much hesitation ; certainly analogy pointed in the opposite direction. Inflammation is admitted to produce gangrene of areolar tissue and of the brain ; and he could perceive no impossibility, or improbability, in the idea that it might also produce similar effects and consequent sloughing in other parts or organs, well supplied with blood. Moreover, he had seen a case, within the past month, of gangrene of the lung, in which all the usual signs of pneumonia had been present for two and a half weeks, as nearly as he could judge from the facts of the case, as detailed at the consultation visit, before any signs of gangrene manifested themselves. He had also arrived at a similar conclusion in another instance, though aware of *Dr. Carswell*'s opinion on that subject. Though he therefore believed that gangrene of the lung is very often, and perhaps generally produced by other causes than inflammation, he could not accede to the proposition that inflammation of the lung never produces it.

Dr. Clark thinks there is no disputing the position, that serous membrane never mortifies as a direct consequence of inflammation. On the other hand, if the cerebral substance becomes inflamed, gangrene, or softening, is very apt to follow, next to the cerebral substance ; gangrene is apt to follow inflammation in the areolar tissue. The next tissue in order is the mucous membrane and the skin, when the tissues beneath are dead, but not often otherwise. *Dr. C.* thinks the membrane lining the air-vesicles is more nearly allied to serous than to mucous membrane.

Dr. Peaslee still thinks the analogy holds good.

Dr. Clark remarked that analogies are good for nothing in a case

like this, unless closely analyzed ; and that the case spoken of by Dr. P. is too vague to be of any practical value, inasmuch as Dr. P. had not seen the case previous to the consultation.

Dr. Peaslee replied that in one sense he entirely agreed with Dr. Clark as to the value of analogies in respect to the proposition under discussion ; in another, however, he entirely disagreed with him. Of course, no such proposition can be established by analogies alone ; nothing but observation can establish any similar positive statement. But analogies may be of great value in the way of putting us on our guard against too readily adopting any such exclusive proposition, and may even be allowed to throw doubt upon it, if they all point the other way ; and it was on both these accounts that he had suggested them. In regard to the vagueness of the case to which he (Dr. P.) had alluded, he would say, that he had not intended to give an account to the Society otherwise than vague ; he only alluded cursorily to it, as a case inducing him to doubt the correctness of the proposition, that inflammation never produced gangrene of the lung.

Dr. Parker thinks it comes to this, if we have a carbuncle in the lung, the dead matter must be got rid of, must be thrown off, &c.

Dr. Clark further remarked, that the branches of the pulmonary artery, anastomose in the lung only with the returning vessels ; hence, if a trunk going to any given amount of the lung is obstructed, that portion of the lung must die.

Dr. Peaslee replied that unless we assume also that inflammation cannot obstruct the minute vessels in the lung, as it is proved is done elsewhere, he should consider that the very peculiarity of the circulation just alluded to by Dr. Clark would render the lungs even the more liable to gangrene as an effect of inflammation ; for if the latter should chance to obstruct a single terminal artery entering a lobule, the whole lobule must necessarily die, and so in proportion to the size of the vessel occluded.

Dr. Clark thinks that the inflammation can affect only the capillaries ; while, in his case, Dr. C. found obstruction in the trunks going to the part by stricture, or obliteration of the vessels.

Dr. Parker presented a testicle taken that day from a man 36 years of age (the history of the case to be presented at the next meeting) ; Dr. P. only wishing to present the specimen in a fresh condition for examination by the Society.

Dr. Weber presented some bones as specimens of the intire osseous system of a female who died in Amsterdam.

Dr. Clark thinks this the most extensive case of carcinoma ever

presented to the Society ; also as confirming the opinion of Markoe upon a case presented to the Society some two years since of a mammary cancer, which seemed to retrograde, leaving the breast, finally, very hard, but afterward manifesting itself in the peritoneum.

Dr. Post remarked upon the large number of foci in *Dr. W.*'s case, without any great centre.

Dr. Parker mentioned the case of a female who resided on Staten Island, whose breast had been diseased, and remained hard for thirty years, and who, finally, died with cancer of the uterus.

Dr. Weber also presented an amputated leg, the details of which were given by *Dr. Parker*, who had seen the case a few days previous in consultation. *Dr. P.* found that the patient had been troubled with pain in the foot since last August ; that he had also been troubled with a small tumor in the popliteal space. This tumor had been poulticed for a considerable time by the then attending physician, who, under the impression that it was an abscess, had finally laid it open, but was disappointed in finding nothing but blood. *Dr. P.* could not detect pulsation, and felt inclined to look upon it as a malignant growth, and, with this impression, advised amputation. *Dr. Weber* saw the case the next day, and, after consultation with *Dr. P.*, amputated at the lower third of the thigh. Upon dissecting the tumor, it proved to be an aneurism of the popliteal artery. *Dr. W.* remarked that the bone was somewhat diseased also, and that the operation was justifiable. *Dr. W.* further remarked that the patient had been troubled with stiffness in the knee-joint nearly a year, with œdema of the lower extremity ; but only for the past three weeks had the tumor increased rapidly. *Dr. W.* considered this rapid increase owing to rupture of the aneurismal sac.

Dr. O'Rourke presented a specimen of cancer of the pancreas taken from a young man, æt. 24, who had always been perfectly well until last spring ; the tumor was mostly situated upon the left side. *Dr. Metcalfe* saw the patient in July, but felt quite uncertain as to the nature of the disease. A *Dr. ———* saw him in September, and thought *he* could cure him. He first bled him in the recumbent posture, "until he saw stars ;" he then gave a powerful emetic, followed by mercury to salivation ; at which stage of the treatment *Dr. O'R.* saw him, and continued to see him, until December 24, when he died.

Dr. Metcalfe remarked that this was a case of unusual interest, on account of the very many adhesions with surrounding organs, and that he did not recollect the record of any case where there was so much destruction of the walls of the stomach. *Dr. M.* found minute,

elongated cells, a very large quantity of oil globules and cells, with large nuclei in the morbid growth.

Dr. Clark asked if the dissection had been so much that they could be sure the pancreas was really the seat of the disease, as this organ was very seldom found diseased, but that disease often manifested itself in the areolar tissue, displacing organs which of themselves are free from disease.

Dr. Batchelder remarked he had repeatedly observed pulsation in abdominal tumors disappearing, and would like to know the cause ; he thinks them generally of a malignant character.



PART IV.—CHRONICLE OF MEDICAL PROGRESS.

Use of the Microscope in the Diagnosis of Cancer.

In a recent number of the *Gazette des Honitaux*, we find the following sensible view taken of the use of the microscope in cancerous diagnosis. C.

What are the microscopic characters which have been assigned to cancer? Without entering into the details of microscopic anatomy, we shall content ourselves with indicating the principal results that have been received. A cancerous cell or globule is found, enclosing cellular contents, and one or more nuclei, in which nucleoli are found ; but the form of this cancerous globule is far from being constant ; being rounded, oval, spherical, often irregular and presenting prolongations, which have been designated under the name of horus, and which themselves enclose numerous nuclei of cancerous globules. Sometimes, even, the cancerous cell is wanting, and there are only nuclei enclosing nucleoli : such is the nucleolated cancer. Such are the characters which have been assigned to tumors designated under the names of scirrhus and encephaloid. But are these the only cancers? No ; for there are other tumors, which, like the two last, have the melancholy privilege of recurring, either on the spot, or in the entire economy : such are the tumors which have been designated under the names of fibro-plastics, of canceroids, and of epithelial tumors. These are not true cancers, for elements of another nature have been found in them. In the fibro-plastic tumor are found fusi-form globules, lengthened at their extremities, and terminating in true

fibres. In epithelial tumors are found cells of which the structure is similar to that of the epidermis or of the epithelium of mucous membrane. Besides these, there are the enchondroma and the melanotic tumors, which also often re-appear with great rapidity, and in which are found elements differing from those just mentioned. Here, then, we have a certain number of tumors, which have all one of the most important clinical characters of cancer, that is to say, which recur, and in which, nevertheless, we do not find the true elements of cancer, that is to say, the cancer cells.

The principal objections, therefore, made to the microscope are, that in the cancer are found cells extremely variable in form, and not always presenting a character of identity ; that homœomorphic characters are found in other tumors ; and that these tumors sometimes re-appear with as much rapidity and as fatally as true cancer. To these objections the microscopists reply by observing, that no matter what may be the anatomical element of tumors, they have, when they re-appear, their primitive characters ; and although some exceptions seem to contradict this theory, we are of opinion that the microscope has been eminently useful in enabling us to make a more accurate anatomical description of such tumors than would have been otherwise possible. In fact, it has indicated their place in nosological classification. But, it may be asked if clinical observation justifies the classification of tumors, as made by the microscope ? Yes, in a great number of cases. In fact, every surgeon has had opportunities of verifying that the march of canceroids is very different from that of scirrhus and encephaloid cancers. True, it matters not which of these tumors it is, the patient always ends by succumbing ; but it is to be remarked, that the march of the disease is far from being the same. Of course, there are points of identity, since these diseases were for a long time confounded. The same remark may be made of fibro-plastic tumors, which re-appear on the same spot or in some other part of the economy, but which often present symptoms of a peculiar character.

Another much more serious objection which has been made to the micrographic examination of epithelial and fibro-plastic tumors, is that they are composed of elements which exist as well in the economy. Thus, in the indurated chancre, and in the tissues indurated by inflammation, are found fibro-plastic elements, and yet these latter affections have a march which is entirely their own. They do not recur. In warts and syphilitic vegetations, epithelial cells are met with. True, warts recur, as do also vegetations, but this is the one

point of contact they have with canceroids ; for what can be more dissimilar than those benignant alterations and an affection which almost always kills ? And it is impossible for the microscope to indicate which of these fibro-plastic and epithelial affections are susceptible of infecting the economy.

We think, therefore, that instead of merely describing cancerous tumors characterized by a cell of a particular form, there is room for admitting many species of cancer—the fibro-plastic cancer, the epithelial cancer, the encephaloid cancer, the scirrhus cancer, and the melanotic cancer. Each of these species of the same genus would have a generic character, that is to say, its re-appearance, and would have, for specific character, the anatomical element established by the microscope. Possibly, the microscope may discover a generic character in the different tumors first enumerated, but it is certainly not the cancerous cell which should be taken as the point of departure ; since it does not exist in a certain number of tumors, which are very properly designated under the name of cancer.

Other objections, which have been made to microscopic observations, appear to us of no great force. Thus, it has happened, that where one micrograph has established the existence of the cancerous cell, another has not found it. But it may be remarked, that one or more errors on the part of an observer, should not be imputed to the method itself ; there are so many causes of error in an instrument requiring such delicate management, that a slight turn of the screw is sufficient to change the whole aspect of the tissues. Besides, in doubtful cases, how often do we see two practitioners of equal skill differ in their diagnosis ? In such cases, one at least must be wrong, and yet the science of the other may justly remain indisputable.

In the actual state of things, we cannot accept all that the microscope asserts ; but we must say, that it has already rendered great services, and we do not doubt, that it will continue to do so. It is open to the reproach of having advanced too far, and of having too readily disregarded clinical observation, although it was there it found the facts which it has used to establish its doctrines. We must add, however, that more recently the attentive examination of facts has enabled it to adopt conclusions more in harmony with the actual development of disease.

Use of Chloroform in Surgery. By Mr. ERICHSEN, F. R. C. S., Surgeon to University College Hospital.

I would wish at present to say a few words as to the mode of administering chloroform. This is a thing which every one should learn, for I am satisfied a very great deal depends on it. You may give your patient an over-dose of chloroform when you least expect it, and an over-dose in some patients will be another word for death. And first, as to the relative value or safety of inhalers or the advantage of a common piece of lint or oiled silk. I do not think this signifies very much, the chief advantage of the tubular inhaler I here show you is, that you know the quantity used, which should always be measured, while when you use lint there is more or less wasted. Yet I think this is counterbalanced in the use of lint, by the gradual and safe mode in which you bring your patient under chloroform, while in the instrument or apparatus it may be that the vapor is too concentrated. You will find a great deal written, from time to time, on this point ; it is, after all, not one of much moment, and as you may be obliged to use chloroform where there is no apparatus, a preference may be given to the lint. You pour a drachm of chloroform over a piece of lint, the size of the hand, do not over-saturate it, place this over the patient's nose and mouth, and then throw a towel loosely over your hand while applying it. You may find it necessary now to replenish the chloroform after a little, as the lint gets dry, and here I would impress on you the necessity of remembering the second quantity is much more dangerous than the first, the patient, for what you may see to the contrary, may be on the verge of a precipice in the balance between life and death. The great point to be attended to is, *watch the pulse*, as when danger threatens, it becomes perceptibly feeble and smaller. The effect of chloroform on the heart is peculiar; at first it quickens the pulse, indeed the general effects on the brain and nervous system at first, so intimately connected with the heart, is one of excitement ; you see the patient pull and drag as if drunk. You see this every week at operations. The chloroform now, in fact, has been absorbed and has got into the system, to this state rapidly succeeds the full anæsthetic effect ; there is partial paralysis also of the respiratory muscles, the respirations are less frequent, the pulse slower, and a very peculiar appearance of the eyes. I am led to believe in this state, under the action of chloroform, our patient is on the "verge of death," and requires our most serious attention ; we must in particular be guarded by not giving an over-dose (indeed,

Professor Murphy would rather err on the side of safety and operate before sensibility is entirely abolished). Patients may be kept a long time under the influence of chloroform, in fact for hours, by intermitting its exhibition for a short time and then applying it again. We now come to a most interesting and most practical point—namely, the mode in which death takes place, for after all this is a point we cannot too seriously study. Our experience of deaths from chloroform is necessarily limited, but the two chief modes by which this fatal result is brought about are—asphyxia or syncope ; the former is not so common as the latter, but chloroform, it is quite possible, may thus kill by simply excluding atmospheric air, as if a patient, in fact, were inhaling nitrogen. This remark is more applicable as putting us on our guard not to give chloroform in a too concentrated shape. We most undoubtedly interfere with healthy respiration during the inhaling of chloroform, but this is different from entire suspension of the process ; we have, in fact, two modes of death, as so well described by Bichât. This asphyxia, as if poisoned by carbonic acid or nitrogen, and again syncope, from the heart's action stopping. We had a sad instance here lately of observing a case of this kind, which was at once a matter of very serious anxiety, you recollect, to all of us, as well as a case from which you may have learned a great deal. I dwell particularly on it, as it is a thing happily not often seen, and the less frequently the better ; it is a case, which in private practice may come on you like a thunder clap, and there is no cleverness or ability in disregarding human life. Our art of surgery is all intended to *save* and prolong human life, but if in the moment of doing so we do the opposite, it will be looked on by the public very unfavorably. We should consider it serious bungling to do anything else awkward, and cause death by opening a large artery for instance. Let us, then, give all our attention to obviate the accident of death from chloroform. This man we speak of had fatty heart, but nobody could have suspected it, and I must also tell you that it is a species of disease very difficult to make out ; you will remember his respiratory muscles stopped, he gasped, and in spite of everything we tried, he was beyond recovery. This is so serious a matter that students can scarcely realize it ; a whole family may thus be thrown on the world, and very great mischief done. Experiments have been tried on the lower animals ; you may lay open the thorax, and watch the heart beating, but it will be as suddenly stopped by an *over-dose* of chloroform as by any over-dose of the most powerful poison ; the muscles of the heart will not respond either to the action of galvanism ; when we have

this impending death from syncope, as I said before, you will find the pulse sink. This is the starting point, so to speak, of a set of fatal symptoms which soon follow, including stoppage of the beatings of the heart, impeded action of the lungs, &c.

The next point that offers itself to our notice is—one also of very great interest—namely, whether nervous depression should prevent or contra-indicate the use of chloroform, it is one at present very much discussed ; whether, in a word, we should use chloroform during the shock of a severe injury, as in a gunshot wound. We should not make this a question of this or that school (Edinburg, or Constantinople, or London) but learn what is the truth. I believe chloroform may be safely used during nervous shock from gunshot wound, as we use it in hysteria or the shock of delirium tremens ; nay more, I rather think it acts beneficially, I think it rather lessens “shock after operation.” We cannot of course use too much caution or care when the constitution has received a serious injury, but I should not be at all inclined to deny a patient chloroform on that account alone ; pain is a much more horrible shock and depressor of the nervous system than chloroform, pain of a knife is not at all a stimulant. There is another form of disease, as in that man we operated on last for varicose veins which I think contra-indicates chloroform much more than “shock of an injury.” I allude to old bronchitis. Where we have a man with one lung, or a lung and a half, I am very chary of using chloroform ; take care of those cases of men with chronic cough and feeble pulse. I fear I cannot say much on fatty heart, it is a very obscure affection, we know it by the usual phrase—the “heart is weak ;” it is an affection, as I have also said, not easy to diagnose ; we can easily make out valvular disease of course, but the signs of fatty heart are rather negative than positive.

Fatty heart, it must be remembered, is a disease which often kills by itself. A man drops down dead in the street, possibly, at some little mental emotion—an omnibus, or something of the kind, runs against him ; he has had fatty heart. It is now a question whether the mere apprehension of an operation may assist as a cause of death. Chloroform should be used with caution at the extreme periods of life. In children I think it advisable to dilute the chloroform with equal parts of spirits of wine ; perhaps in very old people also it would be not undesirable to do the same ; we thus, perhaps, ensure a good mixture of atmospheric air, and prevent the chloroform being too concentrated. Now, as to *treatment* of those apparently dying

from the effects of chloroform, I have very little to say. Artificial respiration is the chief and primary object ; the surgeon has not a moment to spare ; and his own breath will be best. I would pull out the tongue, and thus throw up the opening of the larynx ; I have seen this effectual in two or three instances. The next most valuable agent will be galvanism, a sharp shock through the region of the heart ; if any contractility happen to be left this will restore the circulation ; rubbing brandy to the palate and top of the larynx may also do good by exciting any reflex movements not permanently extinguished.—*Medical Circular*.

The Influence of Fear in Producing Functional Derangements.

BY JOHN B. COWAN, M. D.

THE powerful influence exercised by mental emotions on the condition of the human frame has long been recognized. Under their influence the flow of saliva may be checked, that of urine may be increased, tears may be produced in inordinate quantities, diarrhœa, or copious perspiration, may be brought on. But although these facts have been clearly ascertained, it is difficult, if not impossible, to trace the definite connection betwixt the physical organization and the mental manifestations, in virtue of which these effects follow.

The prevalence of a fatal and wide-spread epidemic affords, however, an admirable opportunity of observing the influence of one mental emotion—FEAR—in producing, or assisting to produce, certain morbid states of the system. Many writers, both on metaphysics and on medicine, have alluded to the symptoms of bodily and mental derangement caused by fear.

Burton, in his “Anatomy of Melancholy,” says—“Many lamentable effects this fear causeth in man, as to be red, pale, tremble, sweat ; it makes sudden cold and heat to come over the body, palpitation of the heart, syncope, &c. It causeth oftentimes sudden madness, and almost all manner of diseases.” And again, after narrating the effects of terror which followed the massacre at Lyons in 1572, he adduces the instance of “Themison the physician, who fell into an hydrophobia by seeing one sick of that disease.” In another part of his work he makes the following very apposite observation :—“Men, if they see but another man tremble, giddy, or sick of some fearful disease, their apprehension and fear is so strong in this kind, that they will have the same disease ;” and, quoting from Dr. Cotta, nar-

rates two stories, "the one of a parson's wife in Northamptonshire, anno 1607, that, coming to a physician, and told by him that she was troubled with the sciatica, as he conjectured (a disease she was free from), the same night, after her return, upon his words, fell into a grievous fit of a sciatica ; and such another example he hath of another good wife that was so troubled with the cramp ; after the same manner she came by it, because her physician did but name it." These, however, are rather instances of the force of imagination acting upon weak minds, than of disease caused by fear.

Dr. Darwin in his great work on the "Laws of Organic Life," treats of the diseases of association, under which he classes those produced by fear. His theories on this, as on other points, deserve attentive consideration, as the results of the studies of an acute observer and original thinker. He accounts for the increased flow of pale urine in hysteric diseases, by supposing that "the motions of the absorbent vessels of the neck of the bladder become inverted by their consent with those of the skin, which are become torpid by their reverse sympathy with the painful ideas of fear." The same effect may follow from anxiety, where there is little fear ; as an instance of which, the frequency with which young men about to be examined for a degree pass urine is cited. His theory of *Diarrhæa a timore* may be quoted entire :—"The absorbent vessels of the intestines invert their motions by direct consent with the skin ; hence many liquid stools, as well as much pale urine, are liable to accompany continued fear, along with coldness of the skin. The immediate cause of this is the decreased sensorial power of association, which intervenes between the actions of the absorbents of the cold skin, and those of the intestinal absorbents ; the motions of the latter become on that account weakened, and at length retrograde. The remote cause is the torpor of the vessels of the skin, catenated (in plain English linked) with the pain of fear. The capillaries of the skin consent more generally by direct sympathy with those of the lower intestines and of the bladder ; but by reverse sympathy more generally with those of the stomach and upper intestines. As appears in fevers, where the hot skin accompanies indigestion of the stomach ; and in diarrhœas attended with cold extremities. The remote cause is the torpor of the skin, owing to its reverse sympathy with the painful sensual motions, or ideas, of fear ; which are now actuated with great energy, so as to deprive the second link of associated motions of their due share of sensorial power. It is also probable, that the pain of fear itself may

contribute to exhaust the sensorial power, even when it produces no muscular action."

Dr. Holland, in his "Medical Notes and Reflections," devotes a chapter to the effects of mental attention on bodily organs. He shows that direct effects follow from consciousness being, by a distinct voluntary effort, directed towards organs or parts of the body. Of the force of this statement every one must be easily convinced. Among other instances, the state and action of the bowels is alluded to as thus influenced. The attention being concentrated on them, sensations previously unnoticed are experienced, and their action excited and quickened. But this, after all, amounts to a species of fear. If not actually commencing, as it is most likely to do, from apprehension or dread, caused perhaps by some reference to that part of the system, the consciousness, unless kept concentrated by fear, is not likely to continue long directed towards it; or the consciousness will degenerate into fear. Feuchtersleben, in his work, "Medical Psychology," says:—"Fear causes especially enuresis, diarrhœa, seminal discharges, erysipelas, and eruptions about the lips; facilitates the reception of contagion and miasma, disturbs crises, and aggravates every disorder." After enumerating instances of actual organic lesions produced by the evidence of this emotion, and instancing its well-known effect in causing jaundice, he adds: "Here we ought to go further, and pass on to the psychical causes which act on the nervous principle; but the quality of these by no means explains their mode of action. Fear and horror act, moreover, variously, either exciting or paralyzing, according to the greatness of the danger, and according to the individuality of the persons affected by them."

There cannot be the slightest doubt that the presence of Asiatic cholera causes in a community, and in individuals, a dread and a terror, which is not exhibited in anything like the same extent during the prevalence of other epidemics scarcely less fatal. The reasons why cholera should excite such powerful emotions are sufficiently obvious. As yet it may be regarded, in this country at least, as a disease of comparatively modern origin. Its exciting abuses appear as inscrutable, as its removal seems beyond the reach of sanitary measures, or the best applied efforts of medical art. Its very suddenness is appalling, so that we have all the elements to keep alive and foster fear. Fear seems to produce, during an epidemic of cholera, no well-marked effects upon those who are under its influence. The one of these, as might be anticipated, is a species of hysteria, so character-

istic that it might be designated by the terms choleraic hysteria ; the other is actual diarrhœa or vomiting.

The hysterical symptoms are most frequently met with in females, but the writer has seen one case in the male which appears to him interesting. On the 26th of December last year, shortly after cholera made its appearance in Glasgow, he was called late at night to see a young man of moderately robust make, and whose employment was that of a groom. His habits were remarkably temperate, and in every respect he was a steady and good servant. He was found walking up and down his room in a very excited state, occasionally applying his hands to his abdomen, and seemingly disposed to vomit. On inquiry, it was ascertained that he had no symptoms of diarrhœa or vomiting, but he declared that he felt, that if he lay down in bed he would immediately purge and be sick. Persuasion was utterly useless, and so was abuse or ridicule. His master lent assistance to strip him by force ; he was compelled to lie in bed, and a strong opiate was administered, under the effects of which he was soon in a profound sleep. He awoke quite well on the following morning, but still labouring under mental agitation, and declared that he had felt convinced the previous night he was dying of cholera. This man seems afterwards to have quite overcome his fear as regards cholera, having watched for a considerable time by the deathbed of a fellow-servant who had been attacked by that disease.

The following instance was related to me by a medical friend :— One evening lately I visited two young ladies, between 20 and 30 years of age, in whose house a relative had died of cholera the previous week. Since then they had been affected with the most overpowering fear of the disease ; they would not eat for fear of inducing vomiting, and felt persuaded that they were both about to take cholera. They felt sick, and had an uneasy sensation over the epigastrium, and though neither of them had previously had any hysterical or nervous affectations, they now frequently fainted, felt alternately hot and cold, and had occasional shiverings. They refused to lie down for fear they should become sick, and scarcely slept at all at night. They had taken no nourishment for four days, except little bits of biscuit, and a mouthful of cold water with some aromatic substance in it, and they could hardly be persuaded to swallow a little wine and water. They had not vomited at all, and they had resisted the inclination, and succeeded in preventing any passage from their bowels for six days, under the delusion that it was the safest way to prevent

diarrhœa. They were constantly moving about to assure themselves that they were still unattacked, and as night drew on they felt perfectly miserable at the thought of requiring to retire to bed. Altogether, I never witnessed such a lamentable example of the effects of fear. I persuaded them to take some tea and toast, a little negus on going to bed, and ordered a laxative pill to both, assuring them that the nourishment would strengthen them, and that they might expect to be better in the morning. They slept pretty well, and in the morning felt more composed, principally I presume from the assurance I had given them that they would be better. The pills operated mildly, and had the effect of relieving some of the uneasy sensations. They still disliked the idea of taking solid food, but gave in when I insisted on their doing so, as well as taking some wine several times. Having once overcome the fear of taking food, they soon regained their strength.

Dr. Steven has detailed to me a more interesting case, that of a man whose dread of thunder was such, that during a thunder-storm he had invariably an attack of diarrhœa. During the epidemic of cholera in 1849, this person resided in Hamilton, and when the disease appeared in that town he kept himself closely secluded in his house, never venturing out. Towards the close of the epidemic, on a day during which he had heard there had been no fresh case of cholera, he went out, and Dr. Steven had some conversation with him. He was attacked by cholera, and died on the following morning ; and his was the last fatal case but one which occurred. It seems apparent that this man felt himself secure so long as he lived secluded, and probably it was to that feeling of security being destroyed, and agitation perhaps induced by conversing on what to him was an all-absorbing topic, that the seizure was in some degree to be attributed. Similar examples might be multiplied, but those narrated are sufficient to indicate the character of a class of cases which all medical men will recognize as having been of frequent occurrence during the last few months.

To such an extent has the fear of cholera existed, that it has led to the commission or omission of acts discreditable in the highest degree to those concerned. We learn from the public press that one unfortunate man was left to die on a public quay ; and this is by no means a singular case of desertion of duty. Husbands have been known to desert their wives, parents their children, and children their parents ; while the relatives of those who die of the complaint, hasten

to bury them within a few hours of their decease. No wonder that the disease should spread in every locality while such a panic continues to prevail.

A fear of the existence of the disease has often been produced by the too indiscriminate employment of opium and other astringent medicines. A loose evacuation called for brandy and laudanum. These were taken, the stomach became deranged, vomiting perhaps occurred, and even cramps, real or imaginary. The medical practitioner was hurriedly summoned to a case of cholera, and from the excitement and vague statements of the patient and attendants, would find it extremely difficult to discover the real state of matters. Or, again, a person has been constipated for some days, takes before retiring to rest some laxative medicines, which, beginning to operate, causes alarm. Opium is resorted to, and the antagonistic action set up soon produces general disorder of the system, increased by mental perturbation not easily allayed.

Although, however, fear undoubtedly produces such derangements as those briefly touched upon, as well as others to which no allusion has been made, it is obviously impossible to trace either its direct influence or to assign to it its due share in causing these effects. But believing, as all practitioners must do, that the violence of this mental emotion predisposes to, if it does not actually directly produce cholera, it is a point, we apprehend, well worthy of consideration, whether no means exist by which it can to some extent be controlled. Every effort should undoubtedly be tried to put an end to cholera being made a constant theme of conversation during its prevalence, and to discourage the practice which has become so common, and is so fraught with injury and danger, of making the public press the vehicle for discussing its various phases and modes of treatment. Any one who has glanced at the *Times* newspaper, for many months passed, must have been struck with the innumerable infallible modes of curing cholera which have been promulgated through its columns, equally unworthy of regard, whether emanating from "eastern travellers" or "hospital physicians." The last and most notable instance of this was the publicity given to a plan of treatment by no means new, which it was stated had been adopted with success in some dozen cases, and which received the approving fiat of the great organ of public opinion.

But while some slight degree of good may result from attempting to check the tendency of the public mind to dwell upon such an

alarming subject, the true source of all this pusillanimous dread lies much deeper, and cannot, we fear, be reached. It is the result of an educational system conducted upon erroneous principles, and the errors and defects of which, more especially as regards the female sex, have frequently been pointed out, and by none more forcibly than by Barlow, who has in a very striking manner shown the fruits of misdirected early training in producing insanity. To the same identical causes—the want of self-control, of moral courage, and, in the case of females of the higher classes, of interesting occupation and active exercise of the mental powers—may be traced the existence and frequency of a fear during epidemics, which is demoralizing in its effect upon a community, and is actually fraught with danger not only to those who indulge in or foster it, but to the public at large, by its undoubted tendency to increase the prevalence and fatality of the epidemic. It is earnestly to be hoped that any future outbreak of cholera may be distinguished by the entire absence of such cases as those shortly related, and may not be aggravated by the violence of such a depressing mental emotion as fear.—*Glasgow Journal*.

Aphorism of Hippocrates.

“Vita brevis, ars longa, occasio præceps, experientia fallax, iudicium difficile”
—Life is short, art long, occasion brief, experience fallacious, judgment difficult.

Such is the language of Hippocrates, the Father of Medicine, in his Aphorism, No. 1. Uttered nearly four hundred years before the Christian Era, it comes down to us, not only clothed with the authority of a great name, but, what is still more, containing truths that are as imperishable as the author's name in the commonwealth of medical science. Each sentence in the Aphorism embodies enough of truth for a volume. We have no time to even comment upon any of them, much less all. The last, “*Judgment is difficult*,” we shall, however, take to serve as the basis for one or two remarks.

In the practice of medicine nothing is perhaps more frequently or more painfully realized than the truth of the remark, “*Judgment is difficult*.” A body composed of some twenty or more *inorganic* elements, and some ten or twelve *organic*, arranged together in the forms of cells of the most delicate structure, tissues of the most complicated character, and organs of greatly diversified functions, all of which being under the influence of, and subject to, the play of the

forces known as those of gravitation, cohesion, chemical attraction, and these again modified and controlled by that mysterious one known as the "*force of vitality*," must give rise, whether in health or disease, to phenomena that, to the individual whose mission it is to repair, make "judgment difficult." Into this complicated mass of matter, often, an invisible, intangible, imponderable, inappreciable agent is introduced, which disturbs the harmonious and delicate relations, to the presence of which we apply the term *health*. What now more difficult than to understand a derangement in matter thus complicated? If our vocation was merely that of an artist, it might do when something gets wrong to say, with the mechanic, that a "screw is somewhere loose," or "that a wedge has dropped out of its place." This, however, might not answer the purpose, even taken in a figurative sense. One of the little cells floating in the life-current has likely come to a place where it has been accustomed to pass, and has been denied admittance—has had to tarry, to lay over for a few days; or perhaps it has met the insidious enemy at a point where it was unexpected, and been robbed of some of its organic or inorganic elements. Again, perhaps there has been "*a solution of continuity*" in some of the fibres of the tissues in the deep-seated parts of the body. Or, perhaps the foreign agent has come in contact with an organ, imparting to it unnatural activity, or what is just as likely, it has disarmed the organ of the ability to act at all. Now how is all this—and this is but a meagre specimen—to be ciphered out? Certainly, in attempting it we are reminded of the saying of the distinguished personage to whom we have alluded—"Judgment is difficult."

Because we are unable always to be perfect in making out the exact character of the derangement, and, as a consequence, are unable to apply the proper remedy, we are upbraided often with the exclamation: "Oh, the glorious uncertainty of medical science!" "Doctors can do nothing more than divert the attention of the patient, while nature cures the disease," etc., etc. But few stop to think of the difficulties we have to encounter in many cases, and the impenetrable mysteries that surround others. Our profession is to attempt the cure; and, although we may succeed ninety and nine times in the one hundred, still a failure in the other case is often a sufficient cause of reproach! "Why not cure all?" is the unreasonable inquiry. It would not be a sufficient offset to such demands to say that the moralist cannot cure all disposed to be vicious and corrupt; or that the lawyer cannot gain all his cases in court; or that

the mechanic cannot mend all the broken machines ; or that the chemist cannot analyze all the substances supposed to be compound ; or that the astronomer cannot always predict the appearance of the comet ; or that the geologist cannot come within a thousand years of the age of the world ; or that the mathematician does not yet fully understand the capacity of the nine digits ; or that the philologist is in the infancy of his knowledge concerning the power of letters ; or that, in short, we are yet but upon the threshold of all science, imperfect in all our efforts, it matters little what is up for investigation—such replies, we repeat, would in no way extenuate, in the estimation of the many, our imagined imperfections. Such being the case, what course is left for us to pursue ? Are we to sit down and pare our finger-nails, in order to kill time, mourning over the want in the public mind of qualities it ought to possess, or make renewed efforts to confer a greater degree of certainty on every thing connected with our vocation ? Are we to sit down and abandon the interests of our profession to the results of chance, because preachers, lawyers, poets, etc., etc., are found mustering with the quacks and charlatans of the day ? The profession, we think, would universally give to such inquiries a negative response. In looking over the record, we find that we have made progress in every age, and in none more than the present. The truth is, however, that we have in charge the most difficult science, or, rather, series of sciences, with which our race has had any thing to do ; and this fact, if properly appreciated by the great mass of our profession, would work out salutary results. It would stimulate to increased exertion. There is scarcely an individual but what might double the amount of labor he is performing, to make himself and others acquainted with the fields yet unexplored. This applies eminently to the young men scattered over the country, many of whom are in regions that abound in facts, which, if carefully collected and arranged, would perhaps untie a knot that has bothered all the men in the profession from Hippocrates to the present day. Indeed, there is no locality where disease occurs, but what contains much that would be useful, if rightly observed and recorded. The chemists are at work in the laboratory, and they are making developments that give increased certainty to our science ; the pathological anatomists are at their posts, examining the tracks of disease on the organism, and why should not medical men, engaged in the practical parts of the profession, be equally industrious in their observations ? The departments of the last are Etiology and Therapeutics—subjects

in much need of investigation. If, therefore, all would labor, the time may yet come when we would not feel so pungently the force and truth of the sentence, "judgment is difficult."—*Ohio Med. and Surg. Journal*.

Suit for Mal-practice.

The case of Thomas Rice v. Wm. H. Thorndike, which has been on trial in the supreme judicial court of this city, has excited much interest amongst surgeons and the members of the medical profession. The plaintiff declared that in March, 1853, while hewing with a broad-axe, in McKay's ship-yard, at East Boston, he inflicted a wound upon the great toe of his left foot ; that the defendant, Dr. Thorndike, was employed as a surgeon to take care of and cure the same ; that the defendant unskilfully and negligently attended to it ; that he amputated the same without the plaintiff's permission or consent, and thereby the plaintiff suffered great pain, was obliged to expend large sums of money to get cured, and was made lame for life. For all which the plaintiff claimed damages to the amount of five thousand dollars.

The defendant answered that, in the discharge of his professional duty, he did attend upon the plaintiff in a careful and skilful and proper manner from the 4th to the 25th of March, 1853 ; that, in the course of said treatment, it became essential and necessary, in his best judgment, to amputate the toe ; that, before amputation, he stated his reasons in full to the plaintiff, and was in turn requested by the plaintiff to take that course which, in his judgment, was best ; that he accordingly performed the amputation, and, in its performance, exercised his utmost care and his best surgical skill. On these issues the case went to the jury. The plaintiff put in a large amount of evidence as to the nature of the wound and the damage suffered. By the deposition of John McDonald, one of the plaintiff's witnesses, it appeared that the plaintiff requested the doctor to do up his toe in the blood as it was, and not to amputate. Evidence was also put in that certain toe bones, represented to be those of the plaintiff, were shown to certain doctors at Newburyport, who testified that, from the appearance of those bones, no amputation could have been necessary.

The defendant's counsel, in opening, offered to show that the defendant was thoroughly educated for his profession ; that he had

received the advantages of the best schools of the country, and of an intimate acquaintance with the most distinguished surgeons of the state ; that he was so eminent as a student in the department of surgery, that upon taking his degree at the medical college he received the appointment of house surgeon at the Massachusetts General Hospital ; that after leaving the hospital, and during his five years' residence in East Boston, he had performed between three and four hundred surgical operations, amongst them some of the most difficult and dangerous known in surgery, and in every instance with entire success. The plaintiff's counsel objected to the admission of evidence of this kind, admitting that the defendant was a skilful surgeon, that in the performance of the amputation he exercised proper skill and took charge of the patient with proper care, but alleging that amputation was unnecessary, and that it was performed without the patient's consent.

The defendant offered four witnesses to prove the nature and dimensions of the wounds, also the boot which the plaintiff wore at the time of the accident, and it was the unanimous opinion of all the surgeons summoned on both sides, that if the wound was as the defendant's witnesses described it to be, amputation was the only proper mode of treatment.

The defendant also put in the testimony of three of the four persons present at the amputation, including the plaintiff's nurse, the person with whom the plaintiff boarded, and another lady who assisted, that though the plaintiff at first wanted his toe done up in the blood as it was, yet, that after the doctor had explained to him the consequences, he told the doctor to use his own judgment and do what he thought for the best ; that the plaintiff was sensible during the amputation, and looked at his toe several times, and made no remonstrance whatever ; that the doctor, in his prior examination of the wound, as well as during the amputation, was calm, careful, and deliberate, and during all his subsequent attendance upon the plaintiff, treated him with the greatest consideration and care ; that the wound under his treatment did well and healed rapidly, and was entirely healed but one small place, when the plaintiff went to Newburyport, and discharged the defendant.

In this case Richard H. Dana and G. E. Betton appeared as counsel for the plaintiff. Wm. Whiting and George T. Angell for the defendant. The jury, after being out about twenty minutes, came in with a verdict for the defendant ; and the following resolution, with

the signatures of the jury attached, was handed by the foreman to the defendant:—

Resolved—That, in the opinion of this jury, Dr. Thorndike exercised the best skill and judgment in the surgical operation in question, and that he is entitled to the entire confidence of the community in the practice of his profession as a surgeon and physician. [Signed by the Jury.]

The following letter has been received by the defendant from the plaintiff's counsel:—

Court street, Jan. 13, 1855.

Dr. Wm. H. Thorndike :

Dear Sir—As the cause which has just been tried involves professional reputation, we think it due to you to say that, on a full consideration of evidence produced by you, and the weight due to the testimony of your medical brethren, we are satisfied with the justness of the verdict.

At the same time, as some question was made on that point at the trial, we feel bound to add that we have not the least doubt that our client, Mr. Rice, has acted throughout from honest motives and in entire good faith, and in reliance upon medical advice.

Your obedient servants,

RICHARD H. DANA,
GEO. E. BETTON.

WM. H. THORNDIKE, M. D.

—*Boston Post.*

On Fissures of the Nipple during Lactation.

Nurses are frequently affected with fissures on and about the nipple. Nothing can be more painful than nursing under these circumstances, and frequently it is necessary to discontinue it, at least on one side. M. Bourdel, Assistant Professor of the Medical Faculty of Montpellier, says he has used for ten years a method which he has never seen to fail when the fissures were not due to a constitutional cause, whether syphilitic or other.

The substance used is the tincture of benzoin, which is applied by means of a fine badger's hair pencil to the cracked or ulcerated surface, so as completely to cover them with this liquid. Only the first application is painful, and this is characterized by a smarting proportioned to the depth of the ulcerations, and does not continue more than a quarter of an hour.

The tincture of benzoin forms a kind of covering on the surface of the nipple, which protects it, and the child takes the breast without

any repugnance, even when the tincture is not dry. This covering, when hardened, defends the ulcer from contact with the air, and the garments, and dispenses with lotions, which are not well borne. Lactation is not interrupted, for it ceases to be painful. Cicatrization takes place at the end of some days. The treatment is never prolonged beyond twelve days.—*Gaz. des Hopitame, Oct. 12, 1854.*

PART V.—HOSPITAL RECORDS.

(Crowded out by a press of matter.)

PART VI.—EDITORIAL AND MISCELLANEOUS.

THE HEALTH OFFICE.—It grieves us to learn how many excellent physicians in this city, and elsewhere in the State, are fretting their quiet souls, neglecting their large fields of practice, spending precious time, pouring out money like water in traveling to and fro, and boarding at the Delavan House, drumming up extensive lots of friends, moving heaven (through the signatures of the Clergy) and earth (through the merchant princes, and men of high professional standing), to induce Governork Clark to bestow upon them the responsibilities, risks, and \$30,000 salary reputed profits which pertain to the Health Office of this port. It grieves us, we say, knowing that but one of the several scores who join in the race can possibly win the goal. Several gentlemen of distinguished ability to fill the post have, earlier or later, been named as applicants for it. This is not to be wondered at, since the temptation is so great. But we might as well remark here that the money-value of the office has been over-rated. In the repeated amendments to the laws regulating the Health Officer's duties, and concerning the Marine Physician at Staten Island, several thousands have been clipped from the former amount that a man might honorably make of it. Then, "the party" that gives so fat an appointment, cannot be expected to give it without "a consideration." Five thousand dollars *per annum* probably is not an extravagant sum to be deducted for the party-tax. Then, in an emergency, the Health Officer must expect to be

called on to foot the bills of the State Central Committee. These, added to the fact that the Officer's establishment is "one of the institutions," and his house open at all times to his troops of friends, should all be calculated by aspirants who are so eager to try the roughness of their physical systems, and to do battle with ship-fever, cholera, yellow-fever, untimely hours, driving nor'-Easters, a grumbling mercantile community that is "down upon him" for every ship detained at Quarantine, and an Argus-eyed press that gloats in rack-ing him for every suspicious vessel that he allows to come up to port.

Most who have applied, on discovering their ill-success, are allowed to return to their professional occupations without any long chapters being added to their personal histories through the newspaper controversies. Our friend Dr. Charles A. Lee, is not so fortunate; his petition was signed by the President, four Ex-Presidents, the Executive Committee, Treasurer, Auditor, and General Agents of the State Temperance Society; and in their preamble they say that they so sign "*on behalf of the Society which they represent.*" This statement brought down upon the Society several sharp Editorials from the politicians, who doubted whether the province of the State Temperance Society, unless in Convention, extends so far as to urge any candidate upon the Governor. It turns out, however, that these officers only signed for themselves individually, and like, we presume, the majority of excellent men arranged upon the Doctor's list of petitioners, held themselves at perfect liberty to sign also the next, and the next, and still the next good man's paper that should be presented; for the names of petitioners, it seems, are not taken as those of persons anxious for the appointment of the man named in the petition, but simply as a force upon which the Governor can fall back, if the one indicated should happen to be the lucky one upon whom gubernatorial favors are aching to descend.

EDWARD C. DELAVAN on the 24th wrote, that his Excellency had just before answered his inquiry "*in the most positive manner, that he was not in the remotest degree committed to any one*" for the office. This might encourage aspirants to try again; but Rumor is understood to say that any man else than Dr. Thompson of Albany "will have a good time getting it." Dr. T. we are not personally acquainted with; but this same Rumor gives him several weighty qualifications for the post. First, he is a Whig; second, he is somebody's brother-in-law; third, he is one of the "splitting Know Nothings"—one who split at Utica, and split at Schenectady, and is good for any amount of split-

ting that the party may require ; fourth, he is a regular orthodox physician, in good standing, which (curious as it may seem) is held everywhere to be an essential element of success, and necessary to prevent the appointment from proving unpopular with the community. Rumor has a great many reporters out ; and she oftener errs in learning too much than too little. In view of her assurances, however, we would venture to advise all who are not *very* sanguine of success, to save their breath for another race, and leave political offices to those who can afford to—accept them unsought. ††.

ITEMS OF MEDICAL NEWS.—The Ministers of Public Instruction (Paris) have raised the salaries of Professors of Medicine from 6,000 to 7,000 francs.

The friends of each are attempting to unite the two Universities of Aberdeen—King's College and University, and Marischal College and University. These are both very old institutions, one dating its foundation from 1500 A.D., the other from 1593 A.D. The Aberdeen University has a chair of medicine.

The *Medical Times* (London) for 1855 is to contain a course of Lectures on Diseases of the Brain, by Dr. R. B. Todd, and a course on Diseases of the Ear, by J. Toynbee. Dr. Stokes' Clinical Lectures on Fever, and Dr. Bence Jones' Lectures on *Materia Medica* are to be continued.

Dr. Charles Reclam of Leipzig, at a meeting of savans at Hohinglu (Sept., 1854), read a memoir "On the Life and Death of Nations," in which he traces epidemics to great moral and political disturbances, rather than to states of the air. For example, "The Reformation, with its executions, refusals of honorable burial, estrangement of old friends, and breaking up of families, was followed by the plagues of 1535 and 1538. The Thirty Years' War that devastated Leipzig, repeatedly brought on the plague which raged from 1630 to 1633, and swept off a third of the city's population. The subsequent tortures and extortions of the Swedes ended in an epidemic which hovered four years over the city, and swept away nearly half its inhabitants. The campaign of 1813 brought on the "war typhus," which spread over all Germany. The popular commotions of 1830 caused the cholera of 1831. The disturbances of 1847–8, the cholera of 1848–9 ; and the threat of a second European war prefaced the cholera of 1854.

THE AMERICAN MEDICAL MONTHLY.

MARCH, 1855.

PART I.—ESSAYS, MONOGRAPHS, AND CASES.

Case of Acute Ovarian Abscess, supervening upon Chronic Disease of the Ovary, in which the Tumor, after Pointing in the Left Iliac Region, moved completely over to the Right. By JAMES MERCER GREEN, M. D., Macon, Ga.

Among the many difficult problems presented for the determination of the practising physician and surgeon, perhaps none are more difficult to resolve than those connected with the accurate diagnosis and treatment of abdominal tumors. Nor need this be considered surprising when we recollect the great mobility of the abdominal viscera, the different degrees of intestinal distention, the varying thickness of the abdominal parietes, and the fact that some of the viscera are subject to a complete dislocation, indeed sometimes break from their attachments and float loosely about among the other contents of the abdomen; these, together with the great diversity in the size, shape, density, and pathological nature of these bodies, render an accurate diagnosis sometimes sufficiently puzzling.

My attention was drawn to some of these practical points, during a professional attendance on a case that I was called to see, in consultation, in the autumn of 1850.

The patient was a mulatto woman, aged about forty, has had two children, and had not enjoyed good health, but had been.

pretty well for the last two years, with the exception of a severe attack of what was apparently rheumatism about the diaphragm, anterior mediastinum, and right thoracic parieties, followed by long-continued and intensely-painful enlargement of the right axillary glands. She also had severe peritonitic symptoms for two or three days, during the above-mentioned attack. She had been severely ill for two weeks, when first seen by me, during the last and fatal illness, with fever, occasional vomiting, pain and soreness in the lower part of the abdomen, and the development of a painful swelling in the *left* iliac and hypogastric regions, occupying most of the former and part of the latter, and encroaching upon the umbilical. This swelling presented in the centre a large and indistinctly fluctuating point, about two and a half inches below the umbilicus and as much to the left of the median line. This *point* was two inches in diameter, and presented the usual superficial inflammation, and surrounding painful induration of the cellular substance that is considered to indicate a phlegmonous collection, in fact, the suppurative engorgement. During the repeated examinations to which it was subjected, a peculiar crackling noise was heard whenever pressure was made at a particular part of the fluctuating *point*, and this sound and the sensation attending it, were compared to those that might be produced by one edge of an overlapping cartilage being forced past an opposing edge. Continuing the examination in the vagina and rectum, no notable change was perceived in either of these canals. The vagina was perhaps diminished in length and the uterus very small and hard. The *diagnosis* at this stage of the case was a phlegmonous collection, either in the abdominal parieties, or in one of the ovaria, or the result of a local peritoneal inflammation isolated by adhesions, at all events a phlegmonous collection. By a continuation of the judicious treatment to which she had been previously subjected—leeches, blisters, &c.—with the energetic use of rectum tubes and enemata, her condition was very much alleviated, and the fever, quick pulse, vomiting, and intestinal distention, were considerably abated, and the patient seemed evidently better. But after a few days all these symptoms returned with increased severity. The abdomen became greatly distended, and the bowels completely ob-

structed ; the tumor increased in size and moved more towards the median line. It could now readily be felt in the vagina, and the uterus was forced lower down, and on introducing the finger *per anum* the small hard uterus was immediately perceived at the bottom of the tumor, which had expanded into a large smooth globular body, completely blocking up the canal, the whole reminding the observer very forcibly of an immensely distended bladder, with its prostate felt through the rectum. It was found impossible to pass a tube beyond the tumor, with the most careful manipulation. This state of things continued for a day or two, by which time the abdomen had reached its utmost point of tympanitic distention, and the tumor had rolled entirely over and a little downwards, into the *right* iliac region, the opposite region having at the same time become perfectly *resonant*, and the phlegmonous *point*, with the superficial redness and surrounding suppurative engorgement having totally disappeared. Our diagnosis now became narrowed down to *ovarian abscess*. Singular, however, to relate, that although the bowels were thus totally obstructed, and had been for a week, although the abdomen was swollen almost to bursting, yet in this state her condition became alleviated in a remarkable manner—the fever subsided to a great degree—the abdominal soreness diminished very much—the pulse was slower and the vomiting only occasional. But as it was clearly manifest that this improved state could not last long, under present circumstances, it was determined, after due consultation, to puncture the tumor, and let out its contents, whatever they were. Accordingly, after carefully examining and percussing for any arterial or intestinal interference, an exploring needle was passed into it, about two and a half inches from the right superior spinous process. A thick, clear fluid soon began to exude through the canula, and continued to do so until a couple of tablespoonfuls had dropped into the basin and coagulated. This was apparently pure albuma, and such as is often found in ovarian tumors. We now thought that our diagnosis, in regard to the phlegmonous nature of the disease, might be erroneous ; but presently a few pearly drops were intermixed with the albuminous fluid ; and then the tube began to discharge a stream of thick, inodorous, laudable pus. The small tube was now

withdrawn, and a trocar and canula of the largest size was passed firmly into the centre of the swelling, and its contents were discharged in a copious, purulent stream, upon removing the trocar. At least four quarts flowed through the canula during the evening and night. In the morning, the discharge having ceased, it was found that the tumor had receded considerable from the abdominal walls, and the canula had slipped out of the opening in it; nor could it ever be reintroduced. But the patient's condition was vastly improved; copious evacuation of fœces and flatus had mostly relieved the abdominal distension, the gastric disturbance had ceased, and she expressed some desire for food. The motions from the bowels continued until the abdomen had resumed its natural dimensions, when the swelling was found to be hardly perceptible—the fever and quick pulse disappeared, the abdominal soreness was removed, and the patient seemed to be in all respects convalescing for several days. At the termination of this period—about the fourth to the fifth day after the puncture—the case again began to alter for the worse rapidly; all the symptoms returned, except that, instead of intestinal obstruction, a diarrhœa supervened, and instead of being distended, the abdomen was sunken and contracted, the tumor becoming more evident as the contraction increased. The patient sunk and died on the 4th November, just thirty days from the commencement of her illness, and fourteen days after puncturing the tumor.

On examining the body twenty hours after death, the bowels were found to be in a state of intense inflammation, and united together, and to the peritoneal lining of the abdomen by almost universal adhesions, and that the abscess had been developed in the *right* ovarium. It was partially filled, containing about a quart of putrid, purulent matter, and had two sacs larger than a hen's egg attached to it—one posteriorly, and the other at the right-hand end; surrounding the latter sac were a number of smaller ones, still filled with clear albuminous fluid. And here was the explanation of the variation between the first and latter part of the fluid discharged by the puncture—the exploring needle having passed through one of them previously to entering the large sac. One of the most remarkable appearances of this diseased mass, and one that accounts for the

peculiar noise and sensation experienced when the tumor was handled during life, was a number of firm ossific plates that lined the sac, from one and a half by one inch in diameter, down to the smallest size, varying from the thickness of a ten cent piece to that of a half dollar, and rendering it so stiff that it would not collapse when laid on the table.

The points that I consider of most interest in this case, are :

First : That after *pointing* on the left side of the lower abdomen, and presenting the usual cellular induration and superficial redness, that seemed to indicate every probability of a complete adhesion of the tumor to the abdominal walls ; yet after this, it rolled completely over to the opposite side and made its appearance in the right iliac region. It is difficult to assign a cause for the development and *pointing* of an abscess of the *right* ovarium, in the *left* iliac region ; but the moving power that impelled the tumor from its position on the left to the right of the medium line, no doubt was the sudden intense tympanitic distention of the larger mass of small intestines situated on the left side of the abdominal cavity, and the probably collapsed state, at this time, of the cœcum.

Second : The occurrence of a peculiar sound and feeling when the tumor was manipulated. This was explained by the *post mortem*, the edges of the strong ossific plates slipping past each other when pressed, and producing the peculiar sound alluded to.

Third : The remarkable improvement of symptoms at the period of greatest abdominal distention. This is a curious circumstance, but one not so unaccountable as it would appear at first sight. It would naturally be expected that when the tympanitic distention approached its height, and the tumor increased to such an extent as almost to fill the pelvic cavity, completely obstructing the rectum and urethra, and pushing the uterus down upon the perineum, the general suffering and the other symptoms would show a great increase in gravity and violence. But it was not so in this and in some other cases of great abdominal distention that have come under my observation. On the contrary, a marked improvement, for the time, took place in the patient's feelings and in the general symptoms. I have seen the same thing exemplified in a case of cancerous disease of the sigmoid flexure of the colon, and still more re-

markably in a case of imperforate anus, where the child lived many days, not suffering much discomfort, with the abdominal parietes distended to a state of semi-transparency. The reason of this temporary, though for the time real improvement in the patient's condition, I imagine to depend on the great and not properly appreciated influence of *pressure*, in diminishing the afflux of blood to inflamed parts. Precisely the same influence as is exercised by the methodical compression of a well applied bandage in certain cases of inflamed limbs, and in some mammary inflammations by adhesive straps. This state of things, however, cannot last long, and the calm must be a deceitful one.

Fourth : The apparent approach to convalescence after the puncture, and the occurrence of inflammation, and a fatal termination after this real improvement in the patient's condition. The relief afforded by the removal of the pressure from the abdominal outlets, and the free flatulent and fœcal discharges can very readily be understood ; the second attack of inflammation may have been owing to the escape of ill-conditioned pus from the tumor into the abdomen, or from the reaction consequent upon the removal of the pressure of distention, but more probably was the result of the severe perturbation to which the parts had been subjected.

Semi-Annual Report of the New York Lying-in Asylum. By EZRA R. PULLING, M. D., Resident Physician.

During the six months ending December 31st, 1854, the total number of patients was 301.

The house cases numbered 64, all terminating favorably to the mothers. Of the children, 3 were still-born.

The vertex presented and the occiput emerged under the pubic arch, in every instance.

The presentation was once complicated by descent of the arm in the right sacro-iliac angle, the occiput pointing towards the acetabulum of same side. Reduction being impossible, version was resorted to, and the left knee was brought down, but, though evolution and extraction were speedily accomplished, the child was dead.

A case of prolapsed funis occurred during the temporary absence of the resident physician. The labor progressed rapidly, and was therefore allowed to terminate without interference by the physician in attendance. This child was also still-born.

Deformity of the pelvis was found in one instance, the space between the ischia being too small to allow the head to pass, even with the aid of forceps. Delivery was therefore effected by craniotomy, after a labor of about sixty hours. All of these complex cases were first labors.

The duration of labor, position of the occiput at the superior strait, and number of primiparæ, are shown in the following table :—

Hours in Labor.	Cases.	R. A.	L. A.	R. P.	L. P.	Unknown.	Primiparæ.
More than 24,..	6	2	3	1	0	0	5
From 12 to 24,..	10	1	8	1	0	0	7
Less than 12,..	48	0	33	2	1	12	18
Totals,	64	3	44	4	1	12	30

The average duration of labor was about 9 h. 40 min. ; in primiparæ, about 13 h. 30 min.

In the cases exceeding twenty-four hours, delay was due once to deformed pelvis, once to descent of arm, twice to uterine inertia, and twice to resistance at the inferior strait. The labors lasting from twelve to twenty-four hours were, in eight instances, prolonged chiefly in the first stage—twice by rigid os, once by excessive size of foetal head, once by obliquity, and once by inertia of the uterus. In three instances there was no assignable cause for delay. Twice labor was retarded by resistance at the inferior strait.

The weight of the child at birth varied from 6 lbs. 2 ozs. to 11 lbs. 8 ozs. Its average weight (8 lbs. 4 ozs.) bore to that of the placenta ($19\frac{2}{3}$ ozs.) the ratio of 1 to 0.1469. In those cases where the weight of the child exceeded 9 lbs., the placenta averaged $24\frac{3}{8}$ ozs., and the ratio was as 1 to 0.1421.

The longest funis measured 44 inches ; shortest, $9\frac{1}{2}$; average, 23. In three instances it was attached to the margin of the placenta ; eight times it was around the neck of the child.

The foetal circulation was examined by auscultation, both before and during labor, in thirty-three cases. In two the foetal

heart could not be heard. In the remaining thirty-one the point at which its pulsations were most distinct during the last month of pregnancy, was from one to three inches below the horizontal plane of the umbilicus, being situated on the median line once, to its right five times, to its left twenty-five times. In two instances it changed from the right to the left side of the abdomen, a few days previous to labor.

The frequency of the foetal pulse, before the commencement of uterine contraction varied, from 104 to 168, averaging 134. In two cases, in which the mothers entered the Asylum laboring under a severe bronchial affection, attended by much vascular excitement, it was 152 and 160 respectively.

The foetal pulse, during labor, averaged about 128. Its range was not fully determined, it being subject to great variations. In one instance, in which ergot was given two hours prior to delivery, exciting the uterus to strong contraction, the frequency of the pulsations was immediately diminished from 140 to 128 per minute, remaining thus depressed until the expulsion of the child.

The district patients numbered 237.

The duration of labor, presentation, and the respective number of primiparæ and of still-born children, were reported in 139 cases as follows :—

Hours in Labor.	Cases.	Vertex.	Face.	Breech.	Feet.	Primip.	Still-born.
More than 24, ..	16	15	1	0	0	7	2
From 12 to 24, .	26	24	0	1	1	12	3
Less than 12, ..	97	92	1	2	2	19	5
Totals,	139	131	2	3	3	38	10

The average duration of labor was 10 h. 10 min. ; in primiparæ, 12 h. 30 min. The causes of the still-births were thus reported :—

Deformed Pelvis,	1
Convulsions,	1
Prolapse of Funis,	1
Strangulation by Funis,	1
Syphilis,	3
Unknown, or not reported,	3

Deformity of pelvis was reported once. Delivery was effected by craniotomy, after a labor of about forty hours.

Prolapse of funis occurred twice. In one case version was performed successfully. The other was left to nature, and the child perished.

There were two cases of eclampsia. One occurred during labor, before full dilatation of the os. It was treated by general bleeding, antimony, external stimulus, cold to the head, &c., while during the paroxysms chloroform was freely administered. Complete dilatation, and expulsion of a still-born child, followed within an hour. There were only three convulsions after treatment commenced, one being subsequent to delivery. There had previously been four or five paroxysms. The patient went on favorably till the sixth day, when, from some cause not fully ascertained, peritonitis suddenly set in, which proved fatal within sixty hours. In the other case, convulsions occurred after labor. The treatment was not reported. The patient recovered.

Selections from Favorite Prescriptions of Living American Practitioners. By HORACE GREEN, M. D.

It is well known to the medical profession of New York that, for many years past, our rooms for the treatment of patients have been visited daily by medical men, not only physicians of the city, but by those who, coming from different parts of the Union to New York, have called on us, either from curiosity, or from a desire to observe every improvement in practical medicine. It will be within the truth to state that the numbers of those by whom we have been in this way honored have exceeded one thousand annually, for many past years.

Ever ready to communicate to the profession any, and whatever, practical knowledge we were in possession of, we have never hesitated to ask of others such useful information as we supposed they might have derived from experience and observation. Acting on this principle, we have accustomed ourselves for many years, when visited by experienced practical physi-

cians, to request of them copies of some of their favorite prescriptions—those prescriptions, from the employment of which they have derived the greatest advantage in the treatment of disease. In this way we have collected together two large manuscript volumes of medical formulæ, obtained from different practitioners coming from every part of the Union, many of them being the contributions of some of the most distinguished American physicians and surgeons of the present time. These therapeutic excerpts, which have come to us through individual contributions, and are the collections of much labor, we propose to give back to the whole faculty, through the *Monthly*, as the choice formulæ of many of the profession of our country.

That many of these prescriptions will be new to the profession, or that all of them will prove to be of equal worth to the practical physician, we are far from declaring; but many of them we have employed for several years, in our treatment of disease, and can speak confidently of their great value.

With the scientific physician it is a matter of regret that, in our present state of medical knowledge, we cannot claim for the principles of Therapeutics that they are fully established on rational grounds.

Until the relations which exist between the pathological condition of internal diseased organisms, and the action of therapeutical agents, is better understood, our knowledge of the ultimate influence of medicinal substances upon these morbid conditions must be necessarily imperfect, and our system of therapeutics be considered rather empirical than rational. We know from experience—and from experience only—that certain remedies are valuable in the treatment of certain diseases; but this knowledge even is limited, and hence the importance of extending its boundaries by collecting from the practical observations of the experienced of our profession.

For obvious reasons, we shall arrange these formulæ under their appropriate heads.

Narcotics and Sedatives.

The narcotic principle in medicine differs from that of the sedative in this, that its primary action is in some degree stimu-

lant, whilst the sedative principle tends directly to depress the vital powers without inducing any previous excitement. The ultimate action of both narcotics and sedatives is to diminish the sensibility of the nervous system, thereby allaying pain and promoting sleep.

Among the direct sedatives *Hydrocyanic Acid* is one of the most prompt and efficient. Administered in appropriate doses, it tends directly to lower the sensibility of the nervous system, to diminish the frequency of the pulse, and to induce a sensation of quiet and calmness throughout the whole system. Alone, or in conjunction with other remedies, Prussic Acid constitutes one of our most valuable therapeutic agents.

The following combinations with this remedy have been proved to be of great service in the treatment of disease :

R Acidi Hydrocyanici, Medicinalis, gtt. lx.

Morphiæ Sulph. gra. iij.

Tinct. Sanguinariæ,

Vini Ipecacuanhæ, aa f.℥ss.

Syr. Pruni Virginianæ, } f.℥ v.

Vel Misturæ Amygdalæ, }

M. fiat misturæ cujas sumat cochlearium parvum bis terve in die.

We have found the above a most valuable remedy in the treatment of chronic bronchial disease ; in allaying the cough present in tuberculosis, and in all pulmonary catarrhal diseases, unattended with fever. As the acid is apt to float on the top of the liquid, the phial should be shaken on the administration of each dose.

R Acidi Hydrocyanici, gtt. xl.

Vini Antimonii, f.℥ss.

Syrupi Tolutan. f.℥iss.

Mucil. Acaciæ, f.℥ij.

M. fiat misturæ, capiat cochl. parvum ter quaterve die.

This may be used in the same cases as the former, when the cough is troublesome, and is attended with some degree of fever.

As a remedy in the treatment of hooping-cough, Hydrocyanic Acid surpasses in efficiency every other known general remedy.

We have employed it for many years in this disease, and can fully substantiate the declaration of Dr. Hamilton Roe, that "Hydrocyanic Acid of Scheele's strength will, if exhibited as soon as the whoop is heard, effect a cure in almost every case of simple whooping-cough." If the disease has been going on for many weeks, its effects are not so immediately felt, but nevertheless it will cure in most instances."*

The following formula we are accustomed to employ :

℞ Acidi Hydrocyanici, Medicinalis, gtt. xxv.

Vini Ipecacuanhæ, f.3ij.

Syr. Tolutan. f.3j.

Aquæ destillatæ, f. 3iij.

Fiat mistura, cujus sumatur cochl. parv. quartâ quâque horâ.

It is important that its use be entered upon as soon as the presence of the characteristic whoop determines the nature of the disease. If the breathing is oppressed, or the symptoms present indicate the existence of bronchial inflammation, the administration of the sedative should be preceded by the exhibition of an emetic, and perhaps by the application of a few leeches to the chest.

If administered too freely, the acid will produce a greatly depressing effect on the vital powers. Should much debility therefore occur during its employment, the remedy should be omitted, and mild tonics, with a more stimulating expectorant, be exhibited for a few days, when the use of the hydrocyanic acid may be renewed.

"The dose of hydrocyanic acid for an infant," says Dr. Roe, "is about three-quarters of a minim of Scheele's strength, gradually increased to a minim, which may be given every fourth hour; for a child of three years of age, about one minim, gradually increased, if necessary, to a minim and a half every fourth hour; for children of ten or twelve years of age, a minim and a half, increased to two minims every fourth hour. It is safer to give this medicine in small doses at very short intervals, than to run any risk of producing too great depression by a

* A Treatise on the Nature and Treatment of Whooping-Cough, by Geo. Hamilton Roe, M. D., Fellow of the Royal College of Physicians, &c., London, pp. 95-6.

large dose. The frequency of its exhibition must depend upon the strength of the patient and the severity of the attack. The dose should be repeated when the effects begin to subside, which in mild cases generally happens in three or four hours ; but when much fever is present, its influence is felt but a very short time ; under such circumstances, 'a larger quantity may be given and at shorter intervals, without any apprehension of danger, *so long as the fever lasts.*' *

R Acidi Hydrocyanici, Medicinalis, f.℥j.

Liquor Potassæ, f.℥ss.

Infus. Columbæ, f.℥ij.

Misturæ. Amygdal., f.℥iv.

Misce. Capiat Cochl. minim. ter die.

In cases of long-continued chronic bronchitis, the physician occasionally finds this disease complicated, with a peculiar irritable condition of the gastric mucous membrane, manifested by tenderness of the epigastrium, a red tongue, frequent headache, and a feverish condition of the system. In such cases where the inflammation has extended to the mucous membrane of the stomach, producing this not uncommon form of *broncho-gastritis*, the exhibition of the above combination, with the hydrocyanic acid, the alkali, and the bitter vegetable infusion, will exert a prompt and a decidedly happy influence on this diseased action.

Combined with the extract of belladonna, hydrocyanic acid has also been found very useful in the treatment of *gastralgia*, and in "*irritable gastric dyspepsia.*"

The following mixture prepared, and a teaspoonful of the medicine administered three or four times daily in these affections, will, by acting on the nerves of the stomach, greatly diminish their irritability :

R Extract. Belladonnæ, gra. x.

Acidi Hydrocyanici, Medicinalis gtt. lx.

Tinct. Columbæ.

Syr. Simp. aa. f.℥j.

Aquæ. Distillatæ, f.℥ij.

Misce.

* Op. citat. pp. 89-90.

The above combination has likewise been employed with great benefit in the treatment of spasmodic asthma.

These, then, are some of the useful combinations of one of our most important therapeutic agents; and we can assure the practical physician that not only in these affections, to which allusions have been made, but in the treatment of many other diseases, he will find these remedies invaluable aids in controlling diseased action.

The *anhydrous*, or pure hydrocyanic acid, which consists of one equiv. of cyanogen, and one equiv. of hydrogen, is of a nature so exceedingly poisonous, that it cannot be employed with safety in medicine. The *medicinal* acid, which is the preparation that should always be directed to be used in our prescriptions, contains only 2.5. per cent. (United States Pharmacopœia) of the pure acid. That of the Apothecaries' Hall, London, contains 3.2 per cent.; whilst the medicinal acid of the French Apothecaries is nearly equal to that of the United States Pharmacopœia—namely, 2.4. per cent. of the pure acid of Gay Lussac.

As the strength of the different medicinal acids cannot be depended on as being always of the same uniform power, it has been proposed that the cyanide of potassium be substituted in medicine for the hydrocyanic acid.

R. Cyanidi. Potassii., gra. xxii.

Alcohol. Officinalis, f.3xi.

Misce.

This preparation of cyanogen, which possesses the same medicinal qualities, and is of the same strength with the hydrocyanic acid, is greatly preferred by many practitioners as a therapeutic agent, inasmuch as it can be depended on as being always of an uniform strength. It may be used in the same doses and under the same circumstances in in which the hydrocyanic acid is administered.

On the Epidemic Cholera. By Dr. A. G. LAWTON, of La Salle, Ill.

The cholera (so called), is one of the most formidable diseases yet known, and one the least understood; we have no clue to

its character by its name ; we have no authors who can tell us what it is or from whence it springs.

My object now is to inquire what it is, if by any means I can arrive at the truth in the case.

In 1832 I was living in the town of Jordon, New York, when the cholera came there, and a number died within a few days. Finally I was taken myself. Towards morning I felt a dull, heavy, painful sensation about the epigastric region, with some slight cramps, but having had no diarrhœa, I was not alarmed. This continued at intervals until 9 o'clock, when suddenly an awful feeling of distress came over me, and I fell down in a spasm. Thus I continued for half an hour or so, during which time I cramped, feeling a sensation as if cold water were falling on my head ; after a while I got up and walked across the floor, and fell down again in the same way, with eyes sunk, skin contracted, complexion changed, skin wet and clammy, cold perspiration and pulse nearly extinct, at which time purging first commenced quite severe, with a rapid failing of the powers of life, which continued about three hours. After this the vital powers began slowly to mend, but the purging continued about twelve hours, after which it ceased, and convalescence continued till health was slowly restored. In a few days after this I saw another case precisely like the above, but in place of terminating in convalescence it terminated in death, in about six hours, the diarrhœa being absent in the forming stage.

Now were these cases cholera ?

In the cholera of 1832-4, although a majority of the cases were preceded by diarrhœa, yet a great part of them were much like the above, as far as the foregoing diarrhœa is concerned. These cases were preceded by some slight indisposition, a hardness or aching about the stomach and bowels, giddiness at times, nervous restlessness and a fickle appetite, which continued for a number of days or more, when the prostrating attack came on suddenly, after some unusual exposure or over-eating. Under these circumstances these cases terminated in death, or convalescence in a very few hours.

In the cases preceded by diarrhœa, the diarrhœa was painless, at least for some time before the termination.

The first indication of the cholera that came to my knowl-

edge, in Missouri, in 1849, occurred in some ague patients. They first had diarrhœa come on suddenly, as the chill came on, after which they had no more until the next chill time, at which time they had a return of it, and died the same night of the cholera. In the course of a few days there were a number of cases of cholera in the neighborhood. Soon after, all the cases along the river were cholera, and this disease spread in the country along the streams, until all the ague and other affections seemed to be merged in this all-prevailing epidemic. Whatever the beginning might be, in whatever form of disease, they all seemed to manifest a strong tendency to terminate in the cholera. After the epidemic become fully developed, all signs of other diseases vanished; and again, when the epidemic began to decline, fevers and agues came in, and as the cholera lessened, they increased, until fevers again became the ruling disease.

In 1849, along the valley of the Mississippi, in May and June the cholera was generally preceded by diarrhœa, or a watery discharge, in July and August, or as the weather became hot and dryer, the worst cases had no diarrhœa.

The first symptom of the cholera is an irregular, or a confined state of the bowels, which is always the case, to a greater or lesser extent, as far as my knowledge extends, though generally overlooked by the patient. This is sometimes followed by a watery discharge, during which time the contents of the bowels divide, the fluid portion passing off while the more solid portions remain, indicating a depraved state of the digestive fluids and a paralyzed condition of the bowels. The patient becomes nervous, easily alarmed, and restless. This state of things may continue for a longer or shorter time, from two days to fourteen, or even longer, according to circumstances, or the conduct of the patient.

During this time the circulation in the bowels is checked, being gorged with blood, by which means assimilation is delayed, and finally suspended, and the diarrhœa continues, and often assumes a frothy, fermenting character.

Meanwhile the fluids of digestion fail by slow degrees, until they fail to be secreted at all, when the juices of the stomach, liver, spleen, and the bowels cease to flow out; the urine is

suppressed, and in fact, the entire secreting surface from the stomach to the descending colon ceases to act; digestion and assimilation totally fail; the contents of the stomach become sour, and constant vomiting and purging is the result;—the viscera of the chest and bowels become gorged with blood, the chyle ceases to be formed, and the blood, being cut off from all supplies of chyle or any other fluids, becomes of a tarry consistence, the watery portion passes off through the skin, as well as by exosmosis, and the subcutaneous cellular tissue becomes disgorged in the same way. This causes a shrinking of the exterior which, although it appears to be considerable in some patients, yet the loss of a very small quantity of fluids under these circumstances is sufficient to cause it all. In this disease, as in some others, the bowels are overloaded after vomiting and purging have continued for a number of days. In one case, after vomiting and purging had continued for a long time without abatement, a dose of castor oil, turpentine, and laudanum, brought away a hardened mass near three inches long and an inch thick, the centre of which was dry and hard. The patient recovered.

Most cholera patients drink considerable water in the forepart of their sickness. When a healthy person drinks water, it is taken up by the various emunctories of the system and used to supply the waste of the different changes, perspiration, &c. Not so with the cholera patient; for in his case all such action has ceased. All action to and from the bowels and stomach has become suspended; hence, the blood failing to receive its accustomed fluids assumes a tarry consistence and settles towards the centre. It no longer flows out to nourish and support the waste of the cutaneous emunctories, while the subcutaneous cellular tissues become disgorged through the skin, and, no longer supported by the blood with its accustomed fluids, it collapses, and the exterior shrinks; the skin becomes relaxed, and the moisture of the flesh evaporates through it as it would on the dead subject.

The evacuations in cholera contain no mucus, for the mucous surface is shut up; they contain no bile, for the biliary organs are closed; they contain none of the juices of digestion, for all the organs that supply this fluid have ceased to act—and these

fluids have ceased to be formed; these organs are paralyzed, and their contents are in a stagnating condition, and they pass rapidly into a state of decomposition, while everything taken into the stomach sours, passing rapidly through the patient; forms the watery discharge, for when the fluids cease to be animalized, chemical action sets in.*

As an evidence of the truth of this, when the medicine takes effect, the first sign of convalescence is that the rice-water discharge changes to a dark green or black very offensive discharge. Soon after this, true bile is found in the stools, and the patient is pronounced to be out of danger. Now, it is my opinion that this dark-colored matter that is discharged at the onset of convalescence is mucus, and the various fluids of digestion partly decomposed in consequence of remaining so long locked up in the system; for when the animal fluids stagnate, decomposition follows; and when decomposition passes beyond a certain point, death is inevitable. When the stools become dark and offensive, and true bile is found to pass, the crampings subside, and all the alarming symptoms of cholera vanish; the exterior regains its native heat, and the skin slowly regains its former plumpness.

When the muscle fails to receive that nourishment from the blood which it requires, it is uneasy; it contracts and relaxes, which is the cause of the spasmodic crampings; but as soon as the blood regains its lost action again, imparting life and heat once more to the muscle and system, the spasms return no more.

It will readily be understood how it may happen that when the digestive fluids have lost their solvent principle, the food is no longer retained in a homogeneous mass, but is apt to divide, the solids becoming compact, while the fluid portion becomes sour and passes off in diarrhœa, &c., while the capillary circulation of the bowels becomes more and more loaded with vitiated matter as the diarrhœa continues.

The evacuations from the bowels lack their peculiar fœcal odor, the dejections from the stomach have no smell or color, the diarrhœa is without pain or griping, so is the vomiting; there is no pain, except in the spasms.

The first symptom of the cholera is a torpid condition of the abdominal viscera, depending on a paralyzed condition of the

* See my former Essay on Consumption.

nervous centres, which may continue up to the very moment of the prostrating attack, or it may be followed by diarrhœa. But when this torpid condition is followed by diarrhœa, the forming stage of cholera is prolonged, and sometimes by a simple treatment, or even a little caution, the disease may be cut off altogether. The cholera has three stages—the forming stage, the stage of excitement, and the stage of collapse; the forming stage is generally long, the stage of excitement varies from thirty minutes to two or three days; the stage of collapse is uncertain, but generally short, and very apt to terminate in death.

This white, watery discharge, which is a common symptom in the forming stage of cholera, which is often mixed with undigested matter, and often looks like fermenting beer or yeast, is a different thing as a symptom from the true rice water discharge; for while this frothy discharge continues, a simple treatment will cure the diarrhœa; but when the true rice water discharge appears in any considerable quantity, it is an alarming symptom, for then the disease soon comes to a close, for this is a symptom of an approaching stage of collapse.

The rice water discharge generally comes on suddenly at the onset, or during the stage of excitement, and is often preceded, and always followed by an alarming degree of prostration and clammy wet skin and perspiration.

This rice water discharge looks like a copious evacuation of water, with just starch enough in it to give it a little opacity, with little flocculi which settle at the bottom, and are plain to be seen through the fluid.

In 1849, around the borders of cholera districts, on the more high and healthy localities, the diarrhœa continuing for a longer or shorter time, the evacuations became loaded with reddish matter, which looked like strings and bunches of pounded flesh; and after continuing for an indefinite time, an alarming prostration seized on the patients, and they died suddenly, without showing many of the ordinary signs of cholera; yet I look upon this as one grade of the cholera modified by circumstances. This type of cholera was common in many parts of the interior of New York State.

July, 1849. A lady, after having a painless diarrhœa two

weeks, sat down to dinner, and ate nearly twice her usual amount, and while yet eating sickened, vomiting and purging followed, and in three hours she was dead.

Another lady, after having diarrhœa two weeks, got up and prepared breakfast as usual, and sat down to eat, when vomiting commenced, with extreme purging. In thirty minutes I saw her, when she had vomited and purged eight times, and discharged over two gallons of fluids, &c. Extreme prostration followed, with cramps and cold perspiration, and she became almost pulseless. Although the retching and tenesmus continued, nothing passed her afterwards, either up or down. She recovered in a few days under a mild treatment.

A boy, nine years' old, in a family where four deaths by cholera had occurred within a few days, had no signs of diarrhœa before the attack. He came in while I was in the house, and fell down in a spasm with cramps, showing all the signs of extreme prostration, having a pale and haggard look, eyes sunk, countenance beginning to shrink, hands and feet cramping, cold perspiration, and pulse failing. Soon after, purging and vomiting began, which only lasted thirty minutes, during which time he passed over a gallon and a half of fluid. After this, nothing passed him up or down, nor did he cramp or have any more spasms; he died in four hours, in spite of all treatment. His death was like passing into a tranquil sleep.

The fourth case I shall set down for comparison occurred July, 1852. The patient was thirty years old, of a good constitution, and had had no diarrhœa. About noon, he complained of an unusual languidness, during which time the upper eyelids seemed to fall down, the patient having to raise them a number of times with the finger. This all passed off in an hour or two, and he thought no more about it; but on the next day at the same hour, the same thing occurred, which also passed off as before; but on the third day at the same hour an awful feeling of distress came over him; his strength failed, his whole frame became powerless, the skin shrunk, the eyes sunk back, the countenance changed, becoming pale and haggard, the muscles quivered spasmodically, the pulse sank rapidly with cold perspiration. Soon after, the stomach sickened, followed by copious evacuations from the bowels, followed by an alarming

degree of prostration. During this time I saw him : he recovered under a mild treatment, although the diarrhœa continued slightly on the next day.

The reader will find by comparing these cases with those quoted from the epidemic of 1832, that they are alike, with this difference, that this last case came on with paroxysms, periodically, like a remitting fever, and this I attribute to climate, locality, and circumstances.

These cases are laid down as a fair comparison for the two most fatal grades of cholera, with one exception—that is, the periodical paralysis of the eyelids spoken of in the last case. I have only seen three cases where that occurred as a foregoing symptom.

The greatest majority of cases in both epidemics had a preceding diarrhœa ; yet all through both epidemics there were cases which had no preceding diarrhœa whenever the weather inclined to be hot and dry.

In all these ague districts the disease assumed more of a periodical character than it did in the non-malarial districts ; and more especially was this the case in 1854, when the epidemic was on the decline, so much so that the cholera and paroxysmal fevers were blended together, at which time the cholera and bilious fevers were often mistaken one for the other. Many cases of bilious fever were treated as cholera ; for the bilious fever sometimes comes on so nearly like the cholera, that it is very difficult to tell the difference at the onset.

In the treatment of the cholera we must be governed by the circumstances of the case, the state of the weather, and the intensity and grade of the disease, always bearing in mind that a little plain common sense is worth more than all the fictitious theories in the world.

I have used nearly all kinds of treatment, from large doses to small—calomel, opium, camphor, quinine, turpentine, castor oil, the nitric-acid mixture, salts, the extract of bark, boneset, fomentations, hot whiskey, cold water, &c., &c., till I am perfectly satisfied with them as to the result.

I have used them in Missouri, Mississippi, and on the rivers, in Illinois and on the lakes, under many and varied circumstan-

ces, and the following is my conclusion as to what I have found to be the safest and most successful mode of treatment.

I commence the treatment with these powders :

R Hydrarg. chlor. mit. ;
Pulv. ipec. et. opii. aa. gra. iij.
Opium. quiniæ. sulph. aa. gr. j. vel. ij.
F. chart. no. iv.

Give one, and repeat as often as it is thrown up. When they are no longer thrown up, then repeat them every half-hour, hour, or two hours, according to the intensity of the symptoms, until they have taken effect, and the character of the stools is changed ; then stop, after which I sometimes use the nitric acid mixture :

R Acidi. nitrici.
Tr. opii. aa. f. ʒj.
Aquæ. camphoræ. f. ʒvj. M.

The dose is a tablespoonful occasionally, sometimes adding a little quinine to it.

During this time I use whatever other means the case may require of a simple nature ; but I have never seen any good come from rubbing the patient ; but there are many simple things which may be done that can do no harm, and may sometimes do good—such as giving mint tea, using hot air, wiping the skin dry when it is wet, or bathing the forehead and breast in cold water. Wine whey, beef tea, or water gruel sweetened with sugar, should be given as soon as convalescence begins, after which soups are the most appropriate as convalescence proceeds.

When the cholera is decidedly epidemic, all other diseases being lost sight of and mingled in this all-prevailing epidemic, then these above-named powders will be found to be the most successful treatment.

But when the disease fluctuates, verging towards other diseases, or especially fevers, which is apt to be the case in dry, hot weather, or when the disease is on the decline, then it will be found advantageous to increase the calomel to ten, fifteen, twenty, and sometimes to forty grains at a dose, leaving the

other parts of the powder as they were, or to leave the opium out entirely, for I have some doubts if the opium does much good under any circumstances.

In 1854, large doses of calomel were followed by more favorable results than in any previous year, and more especially as the epidemic began to decline. When the disease assumes decidedly an epidemic character, the vital powers sink too fast to bear much medicine; and where there is but little life in the tissues, a large dose of medicine will sometimes act more like a poison than as medicines, when a small dose might do good.

It is worse than useless to give medicine unless the stomach can dispose of it and throw it into the circulation; hence the most malignant case must be treated with the most caution and the smallest doses of medicine. Castor oil and spirits of turpentine are valuable remedies when used after the powders, the effects are generally good, and sometimes decidedly so—at least it has been so in my hands. White sugar is a very good thing for convalescents from cholera where it agrees with the patients, to let them eat as much as they want. There is nothing better to rectify the vitiated secretions of the bowels; it is also good in common diarrhœa.

In 1852, I used calomel, camphor, opium, and capsicum largely, but the result did not please me; and after mature deliberation and reflection I changed my opinion as to the pathology of the disease, and concluded to use simpler means. At this time, being called to a family of Swedes where a number had died, and three more were sick, two of whom I considered hopeless, and thought they would die any way, I gave them calomel, Dover's powder, each a grain; opium, quinine, each a quarter of a grain, to be repeated as often as thrown up; afterwards every hour or two hours, as the case might need. In the worst case, seven of these powders were taken in the first hour, and only three afterwards, when I put them on Huxham's tincture of bark, and they all got well.

This satisfied me as to the principle, and I have used milder and simpler means, and more directed against inflammation in the bowels since, and the result has been perfectly satisfactory.

The diarrhœa which precedes cholera has no outward fever, and the best way to cure it is to give these same kind of pow-

ders every three hours till they take effect, then give quinine, or, what is better, Huxham's compound tincture of bark, in tablespoonful doses three or four times a day. If the diarrhoea returns, repeat the same treatment, after which we need not fear for the result, and the patient will soon get well and stout.

There is nothing more certain, in my estimation, than that chloroform, narcotics, and all this class of medicines which injure the nervous sensibility, are pernicious in cholera, and should be used with the greatest caution, more especially after the first signs of convalescence begin. They are good to check the diarrhoea in order to get the effect of other medicines, and that is about all. Hence, all patent medicines called cholera-drops, hot-drops, astringents, &c., together with the entire catalogue of *sure cures*, *preventives*, and the like, are pernicious in cholera, as well as in all diseases bearing the semblance of cholera; and the truth is, they have killed nearly as many in this last epidemic as the disease itself.

In St. Louis, in 1832, '33, and '34, as the cholera fluctuated between the true epidemic tendency and other diseases, it afforded a good opportunity to read its true character; and it was the opinion of some of my acquaintance there, that the cholera was a modified or suppressed fever, and had its origin like all other bilious affections, and that it was nothing more nor less than the bilious fever under the all-prevailing influence of an epidemic atmosphere, with an increased amount of malarious exhalations and humidity.

The more I see of it, the more I am convinced of the truth of this view of the subject, for the following reasons:—

1st. Whenever a person at the onset, or at the beginning of ill-health, has taken calomel, so as to thoroughly cleanse the stomach and bowels, and quinine afterwards, he has invariably gone clear of the cholera afterwards.

2dly. The treatment which we find to be the most successful in cholera is precisely that which we use to cure the bilious fever, namely, calomel, quinine, and opium. Added to this is the fact that, when calomel takes effect to produce bilious stools, the patient is generally pronounced to be safe, after which good nursing, with suitable tonics, is all he requires.

3dly. This very powder, which we find the most successful

to cure the diarrhœa and vomiting in cholera, is the very combination (except the quinine) which I have used for ten years in Missouri to cure the vomiting and purging which come at the onset of an attack of bilious fever.

4thly. That in all ague districts the cholera, when not very intense, is very apt to be characterized by, or to be governed somewhat by the type and form of diseases endemic there. Thus in malarial districts it is apt to come on paroxysmally like the ague, and in non-malarial districts it is apt to follow the more continued type, showing plainly that it is governed by the peculiarities of each locality or country, and that it originates from the exhalations of each peculiar locality where it may exist.

5thly. That in Saint Louis, in 1849, it changed its locality every time the wind changed, and whenever the wind set strong from the north-west the disease received a severe check, and when it continued to blow from that direction long at a time the cholera disappeared, and fevers came in its place, showing plainly that the disease was governed solely by the temperature, state, and condition of the air and humidity.

For the cholera to spread much the wind must come from an easterly direction, and this wind is always loaded with poisonous exhalations from decomposing vegetation, when the temperature and circumstances are favorable for it.

6thly. That those small-pox patients at the Quarantine Hospital, New York, who took the cholera and died while yet under the full force of the variolous disease, give one good evidence that when a disease assumes an epidemic form, it then becomes the most intense grade of disease. Thence it swallows up all local endemic or minor affections, and as they fall into the overwhelming tide, like a small stream running into a large river, the small current they produce is faintly seen sometimes, but is soon lost in the greater and stronger current. The cholera, like an overwhelming tornado, bends everything to its own course; it is only the most inveterate of other diseases which leaves an impression on the face of this devastating malady, and even these are only seen when the cholera has little intensity.

7thly. That there is not a foregoing symptom in cholera that

is not common in many of our ordinary endemic diseases; the crampings, vomiting and purging, spasms of the muscles, and shrinking of the skin, are very common occurrences in congestive and bilious fevers, and this brings us to our conclusion, and that is, that the cholera (so called) is produced by the same causes which produce bilious fever, yellow fever, typhus fever, and diarrhœas, and is, in fact, a bilious affection governed by an atmospheric distemperature, or an epidemic state of the air and humidity, which condition of the air greatly favors the generation of malarial poison, and is a favorable medium for the propagation and spread of mildews and poisonous vapors. This humid state of the air predisposes against fevers, hence all diseases which would be fevers or common diseases, under a dry state of the air, by this humidity, surcharged with malaria, will be changed to, or eventuate in diarrhœa, cholera morbus, bilious cholic, &c., and when this state or condition of the atmosphere attains to a certain degree of intensity, as it often does, under certain circumstances, it assumes an epidemic character. This epidemic character, in consequence of humidity, predisposes against fever. Hence, under these circumstances, all diseases will eventuate in, or incline to terminate in, a class of diseases in which fever only comes as a secondary effect, and this train of diseases will be precisely in accordance with the intensity of this epidemic phenomenon and the attending humidity, and will range in accordance with the circumstance, as follows:—

1st. When the atmosphere assumes this condition, it often has the effect to change the type of fevers suddenly from common fevers to a congestive form, in which the reactive fever is lost, or it fails to appear, and the patient is apt to die suddenly.

2dly. To produce epidemic influenza.

3dly. To produce epidemic diarrhœa and dysentery.

4thly. To produce epidemic diarrhœa and cholera, which are the most intense grades of all these affections, and are governed by some peculiar state of the atmosphere which we do not as yet understand, but we call it epidemic.

These peculiar epidemic circumstances, with humidity, may become of an intensity sufficient to produce death with a suddenness equal to the most corrosive poison, as it did on the

French troops at Baix, near Naples,* in 1528, where it killed twenty-four thousand men in a very few days.

Those who die under such circumstances never show any outward signs of fever or of inflammation, but those who recover at such times have not only fever, but oftentimes have the most intense inflammation of the throat, and sometimes of the lungs, stomach, and bowels. The most intense inflammation of the throat I ever treated was that which sometimes follows an attack of cholera.

When death takes place in congestive fever, the patient dies in the chill. There is no fever at the time, simply because the powers of life are swamped at the start, and nature is incapable of resistance, or is unable to bring on the reactive fever, for fever is produced by an effort of nature to throw off something offensive to its well-being. Therefore fever will not appear in any disease where the morbid agents which produced it have attained to an intensity sufficient to prostrate the powers of life at the onset, as is the case in some epidemics; but as soon as the intensity of the cause lessens, the signs of fever appear, and the epidemic is soon changed to a readable, tractable affection, which anybody can understand and manage.

Those who die of the plague, generally die in the chill, or the cold stage, although some die after a partial reaction has taken place, where some signs of fever are seen; so it is with the cholera, and those who recover from these diseases have more or less fever.

I have only one thing more to add at this time, and that is, that in order to pursue this subject farther to advantage, we need some additional information as to the following point, to wit—an exact and true history of the morbid changes, condition of the tissues, and the fluids circulating in the mesenteric glands of persons who die of cholera. I think these points have been overlooked by pathologists, or at least as far as my knowledge extends.

* See my former essays on malarial diseases, published in the New York Journal of Medicine, &c., vol. 8, page 64, vol. 9, page 54, and vol. 10, page 74, old series.

PART II.—REVIEWS AND BIBLIOGRAPHY.

“Nullius addictus jurare in verba magistri.”

Pneumonia ; its supposed connection, Pathological and Etiological, with Autumnal Fevers ; including an inquiry into the existence and morbid agency of Malaria. By R. LAROCHE, M.D., &c., &c. Philadelphia : Blanchard & Lea. 1854. 8vo. p. 502.

THIS work has been for some time on our table, and might have been noticed at an earlier period, but for the desire to do ample justice to the important subject of which it treats, and the able manner in which the author has accomplished his task.

The book has no preface, but it has a long dedicatory epistle to the author's friend, Dr. Meigs, which amply supplies the place of one ; and in this epistle are contained items of argument and assertion, not without interest to the curious reader—albeit some of them are not very pertinent to the subject-matter of the text. We revel in prefaces ; we consider them to be indispensable to the critic and reviewer. They are like the gnomon on the dial—they show us at the same time the hour of the day, while they make manifest the cause of the tell-tale shadow. They are often abused by both writer and reader ; in such instances they become judges and accusers. The writer exposes his egotism and real sentiments, while he believes he is warping the judgment of the reader. On the other hand, he who neglects to read them frequently loses the best of the book and a key to its proper interpretation.

Now, in this dedicatory letter we have the whole scope of our author's labors explained.

“All the credit to which I think myself entitled—if any can be considered legitimately due to me—is for having collected, within a comparatively small compass, the main facts bearing on the question at issue, derived from reliable sources in various sections of the globe, and from the results of my own personal observation, for having examined, to the best of my ability, the subject in all its bearings ; for having demonstrated, in as forcible a way as I was able, that the idea of the identity under consideration” (the identity of pneumonia and autumnal fever), “*is founded on insufficient and incorrect data, and is, in fact, little more than a dream of the imagination* ; and at the same time for having proved that etiologists, who regard the various forms of autumnal fevers as due to the action of particular poisons floating in the atmosphere of specific localities, *have just cause for en-*

tertaining that belief. This, I repeat, is all I have attempted to perform."

The lazy or indifferent reader might here arrest his study of this book, and yet go abroad with as much information touching the author's work as if he had conned over every line in the 500 pages—might speak with confidence and authority of the author's views, as if he had really followed him, link by link, through his chain of arguments. The industrious student, however, would be prompted to examine and analyze the logic, the pertinency, and value of the author's illustrative reasoning and the soundness of his deductions;—and in this case he would be amply repaid for such pains-taking. We hope to be able to carry our readers a little deeper into the work before us, so that they may judge, by other means than the writer's becoming modesty, of the true extent and value of his labors.

Before we go farther, however, let us remark what is said on those extraneous matters, to which we have already briefly alluded.

"From all I have seen, I can entertain no doubt that more good is to be effected by a patient accumulation and comparison of important facts, and by endeavoring to draw from the whole, correct philosophical deductions, than by adopting a different course, *too common among the professional writers of this country* and elsewhere, who, discarding the results of the experience of former and present times, and relying exclusively on their own too often scanty observations, make up for their other deficiencies by an indulgence in theoretical explanations, and sneer at the patient, slow, and cautious observer, and the erudite student. That the tendency to the course here adverted is displayed by a goodly number of physicians among us is, as you know full well, too true to be denied. It has long been to *me*, and to *others*, on whose natural good sense, sound judgment, and medical scholarship we may rely, a source of deep solicitude, threatening, as it does, if allowed to continue unchecked, to affect injuriously our literary and scientific character, and to retard the advancement of useful professional knowledge among us."*

From this text our author carries us over the whole ground of our medical literature and professional knowledge, and the circumstances which have exercised an injurious influence on them. There is doubtless a large amount of justice and truth in the sentiments which are enunciated, and which it would be well for every intending writer to consider carefully before he rushes into print. But from the peculiar tenor of the whole of this portion of the author's letter, we think that there is a considerable share of old fogyism in it. "Young physic,"

* The italics in this sentence are the reviewer's.—ED.

although not distinctly named, is evidently aimed at; and some of the shafts, well directed and striking home, are nevertheless tipped with spleen and gall. If our literature is in its infancy—if it be incongruous, wasteful, and, to a great extent, useless—the good that is in it is fairly proportioned to the practitioner-students. We venture to affirm that not ten men in a hundred, after they have commenced active practice, ever look at books for their own sake; some practical compendium, some “household medicine and surgery,” ready for the emergency of doubt or difficulty, constitute the entire stock of medical literature to them; and if the current periodical press is looked at, it is simply to see what the schools are about, and to read the report of some interesting case which Brown of —— has given, and which was seen in consultation. Among the true readers and students of the profession, there can exist but little fear of being misled or carried away by ill-digested theory or imaginative speculations. The true standard of both the literary and scientific value of medical writings is easily determined; and no one would waste his time in pouring over pages which do not yield him something to take advantage of in practice, or to think upon in the formation of his opinions. Medical literature is generally thoroughly sifted by competent reviewers before the works themselves pass into circulation among the mass of the profession; and few men, we opine, would purchase a book which could not stand the test of a fair criticism. But the same charge, urged by our author against the medical literature of this country, applies equally to that of every other country, and to every department of literature. We do not see that it is a fault that men write too much; the very habit of writing engenders the necessity of thinking and reading. Let the young physician, then, write as much as he pleases—he will, in time, learn to write *well*; the senior men will bide their own time for reading their lucubrations; and when they do condescend to look into one of the more perfect and valuable contributions of the former, they may find some things both true and new.

We have dwelt on this point, because we were glad that Dr. La-Roche's merits as an observer, thinker, and author, place him without the category of useless writers, and therefore we could use his own strictures with the more freedom as the text of our remarks. Pass we now to the book proper.

We have indicated above that part of the scope and purpose of the work was to disprove the connection of pneumonia with autumnal evers of a malarious origin. This has been well and logically done.

There is a slight superfluity in the diction employed, but the premises are clearly established, the illustrations and examples judiciously chosen, and the whole proposition thoroughly worked out. We know well that an ingenious and well-stored mind could frame an opposite argument to read as pleasantly, but it would fail to convince as the book before us does. Our desire is to induce the profession to read and study the work for themselves, feeling convinced that they will benefit much by its perusal, and we shall therefore confine ourselves to a mere general outline of this portion of our author's labors.

Showing, by reference to the writings of the older authors, that this idea has been entertained for centuries, he proceeds to consider the question under its several aspects.

1st. That pneumonia is common where fevers are seldom or never seen.

"With us," he says, "pneumonia prevails, during certain periods of the year, in localities where autumnal fevers, especially intermittent, rarely if ever originate. In Philadelphia—and the same may be said of other cities—such a thing as a case of the latter disease is seldom encountered."

Again :

"Within the limits of the bills of mortality, including the city proper, where periodic fevers are scarcely ever seen, and a few of the fever districts, the proportion of deaths from inflammation of the lungs and bronchiæ, in thirteen years—1836–1848—amounted to 1 in 11.7."

Apart from the bearing which this statement has on the argument, we may be permitted to hazard the opinion that it seems to reveal a very large ratio of mortality from this cause. We have not the statistics of other cities and countries conveniently at hand for reference, but the impression on our mind is that the average proportion of deaths from these causes may be stated at 1 in 17. He quotes authority in support of the fact that in the New England states and in many localities throughout the world, where malarious fever once existed, it has now, from a combination of causes, disappeared, but that pneumonias have not disappeared with them. This point is amply illustrated by reference to the figures yielded by reports from various authorities, in different countries.

2d. That pneumonia is not necessarily present where fevers are common.

This is the reverse of the former proposition, and is amply sustained by reference to abundant authority of a high order.

“Dr. Forry, in his account of the climate of the United States, remarks of pneumonia, pleurisy and catarrh, that they are invariably less prevalent in the moist and changeable climate peculiar to the sea coast and large lakes, than in the dry atmosphere of the opposite locality ; and we all know that it is precisely in the former localities that fevers abound. In the northern division, the average number of cases of pneumonia in 1000 was found to be 45 ; intermittent and remittent fevers, 231. In the middle division, the averages in 1000 were 74.5 of pneumonia, and 739 of fevers ; and in the southern division, pneumonia, 43, fever, 598.”

In the East and West Indies, Canada, Africa, Spain, &c., the same facts are observable. He thus sums up this argument :

“The result being different—pneumonia occurring where autumnal fever has never originated, or where, if it has done so, it now seldom prevails—we are warranted in concluding that the causes of the two diseases are different ; that the one may exist without the other ; that when the two diseases show themselves at the same time, and in the same locality, two sets of causes necessarily exercise their baneful influences, and produce, not one disease assuming different forms, and presenting different aspects, but two distinct complaints ; that, consequently, pneumonia cannot be justly held up as forming a part and parcel of autumnal fevers, which, as regards etiology, are governed by very different laws, and influenced by very different agencies.”

3d. The fact that the two diseases prevail in different seasons is clearly established ; and,

4th. That they appear under the influence of opposite winds.

Lastly, he points out that the altitudinal range of the two diseases is not the same.

The author then goes into the great question of the existence and morbid agency of malaria. The range of investigation necessary fully to elucidate this question is most extensive, and a glance at the number of authorities quoted will at once convince the reader how industrious the author has been in his collation of evidence, and we have no doubt that the inferences he draws from them and his own conclusions are correct. That there does exist a certain condition of atmosphere—if not a specific element in its composition—in certain localities on the globe, which produces certain morbid phenomena in the animal economy, is indisputable. The researches of chemistry have failed completely to demonstrate it, nor are there any means by which we can ascertain with certainty its physical existence—but nevertheless we are fully justified by analogy, by positive evidence of experimental results, in affirming our belief in the influence it exerts. We must await the fruit of a more subtle and refined chemistry, or

the accidental discovery of some means of manifestation of the true cause of these phenomena ; but in the mean time, for all beneficial practical purposes, it is well to believe in its existence, to regard its nature as we know it, and to derive our rules of practice from the light we enjoy. The author then proceeds to draw a comparison between pneumonia and autumnal fever, with reference to their causes, mode of progression, symptoms, anatomical characters, and the circumstances by which they are influenced ; extending his observations and comparison on the powers of acclimatization, age, sex, and races of people ; and combats the idea that the prevalence of the two diseases at the same time and in rapid succession, is any proof of their identity—showing also that by their combination they may so modify one another as to give rise to disease which must not be considered as a peculiar form of either.

We regret that it is out of our power to give as close an analysis of Dr. La Roche's contributions to the stock of our knowledge on this subject as we should desire ; but we trust enough has been said to exhibit the value of his labors in reference to the special questions treated by him. There are some few assertions which might be questioned, and occasionally a little false philosophy on minor points which could be combated, but these do not affect the whole force of his argument, or the merit of his labors ; and we cordially recommend the book as containing a very complete resumé of good information brought up to the present day—enriched by several facts of great value, the fruit of the author's observation. ††

Traité de Chimie Anatomique et Physiologique Normale et Pathologique, ou des principes immédiats Normaux et Morbides qui constituent le Corps de l'Homme et des Mammifères. Par CHARLES ROBIN, Docteur en Médecine et Docteur en Sciences, &c., et F. VERDEIL, Docteur en Médecine, Chef des Travaux Chimiques à l'Institut National Agronomique, &c., &c. Tom. III., accompagné d'un Atlas de 45 Planches, &c. Chez J. B. & H. Baillière, Paris, London, et New York.

A Treatise on Anatomical and Physiological Chemistry, both Normal and Pathological, or of the Normal and Morbid immediate principles which constitute the body of Man and the Mammifera. By CHARLES ROBIN, Doctor in Medicine, and Doctor in the Sciences, &c., and F. VERDEIL, Doctor in Medicine, Chief of the Chemical Works at

the National Agronomic Institute, &c., &c. Vols. III., octavo, pp. 723, 581, 573, with an Atlas of 45 Plates. Published by J. B. & H. Baillière, Paris, London, and New York.

WE entered upon the examination of this work with high expectation of its merits. Both of its authors are thoroughly educated medical men. M. Robin is also Professor of General Anatomy, and member of several of the medical societies of Paris, and one of the best microscopists in that metropolis, as his work on the "Microscope and Injections in their application to Anatomy and Pathology," and his "Natural History of the Vegetable Parasites which grow on Man and Living Animals" sufficiently attest. The former was published in 1849, and the latter in 1853. M. Verdeil is also Professor of Chemistry, and member of several of the societies just mentioned. Moreover, the motto* which the authors have adopted for their work, gives assurance against those exclusive views of chemical actions in the human body, and those purely-chemical theories of life and vital action which characterize most works on organic chemistry.

Nor have we been disappointed in our expectations. We find many prevalent errors exposed in this work in regard to the chemical composition and the chemical reactions of the human body, and many entirely new statements in regard to these subjects. Of many of the latter, time and the investigations of others also can alone determine the value. Meantime much has, at all events, been done, by showing us some of the errors which are so generally received by the medical profession, and made to constitute the very basis of our physiology and pathology;—for though we would utter a caution against receiving unquestioned all which the authors have proposed instead of that which they show to be unfounded, we consider that both physiology and pathology will be essentially benefitted by being severed from many of the chemical errors hitherto associated with them, and essentially advanced by new investigations to which this work will give an impulse and direction. Extending, as it does, over 1877 octavo pages, and treating its manifold subjects in an almost exhaustive manner, we can only notice such topics as are of special interest to the histologist, the physiologist, and the pathologist; and this we will attempt to do, even at the risk of prolixity. And premising that the plates are splendid illustrations of their particular subjects, we proceed to our task.

* "*Chymia egregia ancilla medicinæ, non alia peior domina*" Lin^d, *Traite du Scorbut*. Paris, 1736, t. 1, p. 78.

The object of the work is to put "anatomists and physicians in a situation to know exactly the intimate and molecular constitution of the organized substance [of the body], in its three fundamental conditions—solid, demi-solid, and liquid;" to examine, in an organic point of view, each of the bodies (immediate principles), which, by their union, molecule to molecule, constitute this substance. It is "not to study the *organized matter itself, but the parts which compose it.*" The former will be considered in a subsequent work (p. 1).

These parts are termed "immediate principles," and which are defined to be, "*the last bodies constituting, or having constituted the organism, to which the latter can be reduced by anatomical analysis; and which admit of no farther subdivision into several kinds, without chemical decomposition.*" Sugar, gum, starch, cellulose, water, &c., are immediate principles to a plant—and water, albumen, fibrine, fat, urea, &c., to an animal. The carbon, oxygen, hydrogen, &c., composing these, are the *elementary or mediate* principles of the plant, or the animal, respectively (p. 120).

The expression, "immediate principles" is borrowed from Chevreul, who thus defends its use: "Some scientific writers think this expression objectionable, since it is not reasonable to apply the word principle to compound bodies. I do not participate in this opinion; for when we consider in a general way the composition of a salt as established by Lavoisier, it is apparent that it is constituted by the union of an acid and an alkali, rather than by the elements of the acid with those of the alkali; since if these elements are united in other proportions than such as constitute an acid and an alkaline body, they no longer give us the idea of a salt. Hence it seems proper to say, that the acid and the alkali are the two immediate principles of the salts. It is the same with sugar, gum, starch, lignine, &c., in respect to a plant; and with fibrine, albumen, cellular [areolar] tissue, &c., in respect to an animal. These substances should be regarded as the *immediate principles* of the plant, or of the animal to which they belong; while oxygen, nitrogen, carbon, and hydrogen are their *remote or elementary principles.*" *

Thus the subjects of the work are intermediate in their character between *organic chemistry*, as generally understood, on the one hand, and *histology*, or the study of the tissues, on the other. They are therefore of the greatest importance as preliminary to the latter.

* Chevreul, *Recherches sur les corps gras d'origine animale*. Paris, 1823, p. 4-5.

The immediate principles in the body of man and of the mammiferæ are 92 in number ; and are divided into two groups—(1) *crystallizable* or *volatile*, without decomposition ; 2d, the *non-crystallizable* or *non-volatile*, independently of decomposition. The latter are far less numerous, but generally form the major part of the corporeal mass.

The *first* group is divided into two classes—(1) Principles of *mineral origin* (28 in number) ; (2) Principles formed within the body by *dis-assimilation*, and of *organic* origin (46 in number).

The *second* group is not divisible, and forms by itself the 3d class—*organic substances* (18 in number).

The first class is divided into two subdivisions (*tribus*). (1) Those principles which are *gaseous* or *liquid*, and *not saline* (7 in number) ; (2) Those which *are saline*, or *salts* (21 in number).

The second class is divided into four subdivisions : (1) Acid, or saline principles ; (2) Nitrogenized *alkaloids*, usually so called, neutral nitrogenized compounds ; (3) Neutral non-nitrogenized compounds, or sugars ; (4) Fatty and saponaceous principles, or compounds.

The third class includes three subdivisions : (1) Those naturally in a *liquid* state, 7 in number ; (2) The demi-solid, or solid, also 7 in number ; (3) Pigmentary substances, also solid, or demi-solid, 4 in number.

The following table will give a view of the classification just described :

FIRST GROUP—*Including two Classes.*

FIRST CLASS.—*Principles of Mineral Origin*, 28.

1. *Gaseous*, and *not Saline*, 7.

Oxygen,	Proto-carburet of Hydrogen,
Hydrogen,	Sulphuretted Hydrogen,
Nitrogen,	Water.
Carbonic acid,	

2. *Salts*—21 in Number.

Chloride of Sodium,	Sulphate of Potassa,
“ Potassium,	“ Soda,
Fluoride of Calcium,	“ Lime,
Hydrochlorate of Ammonia,	Basic Phosphate of Lime (Bones),
Carbonate of Lime,	Acid Phosphate “
Bicarbonate “	Phosphate of Magnesia,
Carbonate of Magnesia,	Neutral Phosphate of Soda,
“ Potassa,	Acid “ “
Bicarbonate “	Phosphate of Potassa,
Carbonate of Soda,	Ammonio-Magnesian Phosphate.
Bicarbonate “	

SECOND CLASS.—*Principles of Organic Origin formed within the body by dis-assimilation*—46.

1. Acid, or Saline Principles, 23.

Lactic Acid,	Hippuric Acid,
Lactate of Soda,	Hippurate of Lime,
“ Potassa,	“ Soda,
Lactate of Lime,	“ Potassa,
Oxalate of Lime,	Inosate of Potassa,
Uric Acid,	Pneumic Acid,
Neutral Urate of Soda,	Pneumate of Soda,
Acid “ “	Taurochlorate “
Urate of Potassa,	Hyochoinline “
“ Magnesia,	Glycocholate “
“ Lime,	Lithofellic Acid.
“ Ammonia,	

2. Neutral Nitrogenized Compounds, 6.

(Nitrogenized *Alkaloids*.)

Creatine,	Chlosodate of Urea (Urea with marine salt),
Creatinine,	Cystine,
Urea,	Allantoin.

3. Neutral Non-Nitrogenized Compounds. Sugars, 2.

Sugar from the Liver. Sugar of Milk.

4. Fatty and Saponaceous Compounds, 15.

Cholesterine,	Caproate of Potassa, Soda, &c.
Seroline,	Oleine,
Oleic Acid,	Margarine,
Margaric “	Stearine,
Stearic “	Elaierine
Oleate of Soda,	Stearerine,
Margarate “	Cetine.
Stearate “	

SECOND GROUP—*Constituting the Third Class*.

Organic Substances, or Coagulable Principles, 18.

1. Those naturally liquid, 7.

Fibrine,	Pancreatine,
Albumen,	Mucosine,
Albuminose,	Ptyaline.
Caseine,	

2. The solid and demi-solid, 7.

Globuline,	Cartilgeine,
Crystalline,	Osteine,
Musculine,	Heratine.
Elasticine,	

3. Pigmentary substances, 4.

Hæmatine, or Hematoine, Biliverdine, Melanine, Urrosacine.

We have taken some pains to construct the preceding table, since the authors have not done so ; though such a view of the arrange-

ment of the subjects treated in the work, greatly facilitates both its study and its analysis.

We cannot stay to consider the general topics discussed in the first volume. It closes with a full historical account of this department of science (termed Stoechiology), from the time of Van Helmont down to the present day. The following are the principal names mentioned in this account, the whole time being divided into three periods :

1st Period.—Robert Boyle, Kunkel, Papin, Bohn, Vieussens, Stakl, Barchusen, Juncker, Boerhaave, De la Garaye, Macquer, Shaw, Baume, Rouelle, John Hunter, Schèele, Guyton de Morveau, Lavoisier, Van Bochanté, and Sage.

2d Period.—Fourcroy, Choptal, Plenk, Thénard, John, Berzelius.

3d Period.—Chevreul, Kurt, Sprengel, Huënefeld, Blainville, Raspail, Burdach, Dumas, Liebig, Mulder, Lœvig, Simon, Henle, Lehmann, Mandl, Donne, Foucault, Gorup Bèzanez.

The second volume commences the consideration of the immediate principles contained in the preceding table, and in the order of the same. It disposes of the whole of the first group, except the fourth division—the fatty and saponaceous bodies—of the second class. The mathematical (the number, form, &c.), the physical, the chemical, sensible, and organic properties of each class precedes the discussion of the individual principles included in it.

With the contents of the last two volumes we shall endeavor to make the readers of the MONTHLY more, especially familiar ; though we must confine ourselves to the immediate principles of the human body.

The amount of free *oxygen* in the body (in arterial and venous blood, and in the air-cells and bronchial tubes, and sometimes in the stomach), is about $77\frac{1}{4}$ grains, on an average. The whole amount of arterial blood is, to the venous blood, as 2 to 3. But arterial blood contains more oxygen than venous in the proportion of 2.41 (or even 3) to 1 (or 1.17). And the whole amount of blood is (12 to 13 kilogrammes) about 26 to 28 lbs. Hence there are about $9\frac{3}{5}$ cubic inches (150 cubic centimetres) of oxygen in the arterial blood, and about $14\frac{1}{2}\frac{1}{5}$ inches ($225\frac{1}{2}$ cub. cent.) in the venous blood ; and 61 grains by weight in all. It exists in the blood in a liquid state—a state of *solution*, and yet in *chemical* combination also (p. 35).

The amount of oxygen consumed in respiration by an inhabitant of Potosi, 13000 feet above the level of the sea, equals only $\frac{2}{3}$ of that consumed by an inhabitant of a maritime city. Of course the amount of carbonic acid given off from the lungs is in the same proportion.

The theory of Liebig adopted by French and German chemists generally, that in case of the higher animals, the oxygen consumed is destined to combine finally with the calorific (respiratory) elements of the food (sugar, starch, fat, &c.), thus forming carbonic acid, water, and urea, and for the *purpose of producing and maintaining the animal heat*, is believed by the authors to result from a very narrow and erroneous view of the subject. Heat is the *result* of nutritive changes of all kinds ; but not the *object* of them. It is developed principally in the blood. But we must refer for the arguments and the facts as to how far French and German chemists disagree in respect to the substances which are thus consumed by the oxygen, to pp. 52 to 64.

Hydrogen exists normally in the stomach, colon, and cæcum, forming, of all the contained gases, 3.55 per cent. in the first organ ; from 5.4 to 11.6 per cent. in the colon ; and 7.5 in the cæcum. This hydrogen is formed in the alimentary canal ; but precisely how, has not been ascertained. There is also a very small quantity in the gases expired in normal respiration. None has, however, yet been found in the blood, though it might be expected to exist there in some slight degree (p. 64).

Nitrogen is found in the air-cells of the lungs, in the blood, and in the intestinal gases, both healthy and morbid. The whole amount in the lungs and the blood varies between 534 and 328 cubic millimetres,* or from 46.755 to 47.52 grains. It forms from $\frac{1}{6}$ to $\frac{1}{16}$ of all the gases in the blood, there being more in arterial than venous blood (1.51 to 1), and is *dissolved* in this fluid. Animals suffering from emaciation inhale more nitrogen from the atmosphere than they return to it by expiration.

Carbonic acid gas exists in the lung, the blood, the alimentary canal, and the urine. The amount dissolved in the blood would be sufficient in its gaseous state to occupy from $\frac{1}{5}$ to $\frac{1}{3}$ the space filled by the blood. There is more in arterial than in venous blood (123 to 100), as is the case with oxygen and nitrogen also. It is dissolved in both the serum of the blood and the corpuscles ; while oxygen is dissolved principally, if not exclusively, in the latter alone. The fact of its greater amount in arterial blood confirms the idea that it is formed in the lungs by the action of pneumatic acid on the carbonates in the blood.

Carburetted and *sulphuretted hydrogen* exist constantly in the air

* Or between 1.29 and 1.47 cubic inch—a millimetre being 1.25 inch.

expired from the lungs, but in too small an amount to be calculated. A small amount is found in the alimentary canal, in the large intestine only. The sulphuretted hydrogen is always in smaller amount than the other gases in the intestine. This gas is also disengaged in abscesses near a mucous membrane (e.g., near the anus), by *putrefaction* of pus, or of organized tissues ; and in some rare cases, if the abscess is elsewhere situated (under the deltoid even, on the limbs and in the kidney, p. 111). [It is also frequently developed in connection with necrosis, or caries of bone. E. R. P.]

The Protoxide of Hydrogen, or Water.

Pure water (as obtained by distillation) is found in every fluid, and every tissue, however solid (even enamel), in the body, uniting in true, binary combination (though a feeble one) with it, and forming one of its essential constituent parts.

The cubical mass of the body varies from 62 to 70 litres* in the male, and from 46 to 53 in the female ; equal in the former to a cube of 40 to 41 centimetres (16 to 16.4 inches) on a side. Of the preceding quantity, at least 42 or 43 litres are water ; or the latter alone equals a cubic mass 36 to 38 centimetres (14.4 to 15.2 inches) on a side. About $\frac{2}{3}$ of the weight of the body is due to its water, and $\frac{1}{3}$ to the solids (Burdach). Not quite $\frac{3}{4}$ is water, say our authors. Of course the proportion is greater in infancy and childhood. But at all epochs it is the most general and the most diffused of all the immediate principles.

A very interesting table is given (pp. 115–18), showing the proportional amount of water in each fluid, and in each tissue and organ in the body, which we cannot copy here. It appears that with the exception of enamel, dried cuticle, teeth, bones, tendons, and elastic tissue, there is not a tissue in the body which is not more than one-half water. Enamel is only $\frac{1}{500}$ water (Senac), and the substance of the testis $\frac{887}{10000}$ water. The human brain is $\frac{789}{10000}$ water (Denis). But no tissue, or fluid in the body, has always precisely the same amount of water, or of any other immediate principle. It varies constantly, though within narrow limits, from $\frac{1}{10}$ to $\frac{3}{10}$; and the mean is given in the table alluded to.

But the other immediate principles vary with the variations in the water. Hence the error of those who would find the cause of a disease in one tissue or fluid alone, or who would cure them by the ad-

* A litre is very nearly a quart in measure.

ministration of water alone, or of any other immediate principle exclusively.

In all the tissues and organs just mentioned, in which less than one-half is water, and in many cases where the water constitutes $\frac{7}{10}$ (muscle) to $\frac{5}{10}$ (cortical substance of calf's brain) of the whole, the water is in a solid state, and entirely different from any condition in which it is found in the mineral kingdom. Hence muscle has more consistence than blood, and the cortical substance of the brain more than synovia; though these two fluids have less water than the solids compared with them. This water is therefore in chemical combination in the tissues, and not interposed between their elements.

In the fluids the water is, of course, in a *fluid* state, and here holds solids in solution. In a single instance only—the halitus from the lungs—is the water in a *gaseous* state.

Mere solution is chemical combination, but the feeblest known. Water combining with a solid in less amount than sufficient to dissolve, is *fixed* in it, itself becoming solid; in increased quantity, it dissolves the other substance, that, on the other hand, becoming fluid. The *organic substances* (albumen, musciline, &c.) have the peculiar property of fixing an amount of water of far greater volume and weight than themselves, while they still remain, and also render the water *demi-solid*. Organs formed principally of these substances, however (and hence containing much water, as explained), alone *live* independently and on their own account; alone present the double vital phenomenon of composition and decomposition. Other tissues and organs manifest only a vegetative, and not animal life.

But it is not, however, pure water—the mere protoxyde of hydrogen—that is fixed and solidified by albumen, gelatine, &c., but a *saline solution* instead. Hence they swell when immersed in pure water, since a greater amount of the latter is generally fixed.

The muscle of the calf contains more water than that of the ox; but an equal weight of human bone (separate from the marrow), whether from the infant or the adult, contains the same amount of water.

A table is given of the diseases in which the blood contains an abnormal amount of water, whether in excess or diminution. Since, however, the blood is, in almost all cases, taken from the arm alone, while that of the vena portae, of the hepatic veins, and of the renal veins, is different, and cannot be examined in man; we need farther investigation in regard to the blood in these latter vessels, in case of

diseased animals, that we may thus infer its condition in them, in case of disease in the human body.

The amount of water in the urine voided in twenty-four hours, in health, may vary from 12,000 to 22,500 grains. Its amount is increased in polydipsia, chlorosis, diabetes, and by a hysterical paroxysm.

Whence comes the water in the body? for it both enters and leaves the body already formed, *i. e.*, as protoxide of hydrogen. The water in the ovum, and in the embryo during development, is obtained from the body of the mother—first by imbibition from the mucus of the Fallopian tube by the vitelline membrane; then by the villi of the chorion; and when these become vascular after the development of the allantois, they derive it from the mother's blood till birth. Subsequently it enters the blood from the alimentary canal, having entered the latter with the food, or as a beverage; accidentally entering also (as by bathing) by the skin. M. Barral finds that more water leaves the body than enters it, and shows that the surplus is formed in the body by the combination with hydrogen of the oxygen in the respired air, and the excess of oxygen over the hydrogen in our aliment. Our authors consider it doubtful (1st) if there is such an overplus of water; and if there is, it is doubtful (2d) if it is formed in this way. The water makes its exit from the body by the kidneys, in the fæces, by the skin, and from the pulmonary mucous membrane, about one half escaping in the urine.

Uses of water in the body. It gives to organic substances their mechanical properties; to fluids their fluidity; to demi-solid substances their elasticity and particular consistence; and different properties to the hard parts—to cartilage its flexibility, to bone its tenacity. But in the last, the water is more intimately united; and being once separated will not unite again. Water gives to all parts the possibility of manifesting their chemical properties also; and hence that instability characteristic of organized tissues, and the constant acts of combination and decomposition. But it also, with these advantages, confers the liability to sudden changes in the blood, or in the organs, from putrid, purulent, or mephitic infections; facilitates the transmission of poisons; procures the aptitude to decomposition; and hence, in many cases, induces sudden death.

Second Division of the First Class of Immediate Principles.

This division includes all the *salts*, of which there are twenty-one, as shown in the table. The ashes resulting from the combustion of

each tissue represent the salts therein nearly, but not precisely ; as the carbonic acid of the carbonate is set free by too elevated a temperature. None of these compounds are combined with those of the second class, except common salt, which combines with urea (chlorosodate of urea). They are, like the others, dissolved in water ; or being dissolved, they may then serve as solvents for the latter, *e. g.*, solutions of salts with alkaline bases in the serum of the blood, dissolve certain fatty principles there. It is in this combination with soda that urea exists in the blood, in the vitreous humor of the eye, and, in part also, in the urine.

But some of these, especially several of the phosphates and carbonates, combine directly with one or two of the organic substances (third class), whence result certain forms of organized substance, or bones, teeth, &c. But salts also enter into the constitution of every organized tissue, though sometimes in the slightest degree, in the same manner in which the phosphates are united to the ostéine (p. 161). Thus the principles of the second class make part of the organized substance, only in an accessory manner, and are directly rejected, mostly, in the urine and the bile. Their accumulation may become destructive even, as when fat accumulates in the epithelial cells (*e. g.*, of the kidney or the liver), and, in other cases, of fatty degeneration. Very corpulent persons do not attain to an advanced age. The adipose tissue is the only one formed almost exclusively of principles of the second class.

The salts under consideration, especially the earthy salts, by their union with the principles of the third class, manifest a power in aid of assimilation ; they also aid in *dis*-assimilation, by yielding their bases to acids of organic origin (uric, hippuric, &c.), and by these latter combinations also, the animal heat is, in part, produced. Moreover, their presence with the principles of the second class alone enables several of the latter to combine with oxygen, and even to displace it from metallic oxides.

The principles of the first and the third classes alone are alimentary—are assimilable ; and both these are indispensable. Those of the second class are already *dis*-assimilated substances, and pass soon into the state of carbonates, and then of carbonic acid, or are rejected, either unchanged or after isomeric catalysis, in the urine. Hence food not containing *both* these classes cannot be assimilated, and will not long sustain life (*e. g.*, muscle, albumen, sugar, &c., *alone*).

Leibig discovered in respect to this class that the phosphates and

carbonates of soda may replace each other in the blood without detriment. Hence, if the food contains only phosphates, without carbonates—*e. g.*, bread and meat—the blood contains no carbonates ; if potatoes be added to the preceding, the blood contains some carbonates ; and if the diet be of fruits alone, the blood acquires the character and the composition of that of the ox or the sheep. The urine also contains alkaline phosphates in the first case, and alkaline carbonates in the latter.

The observations of Bence Jones, to the effect that, in chorea and delirium tremens, the sulphates and urea are increased in the urine, while the phosphates are diminished, and that in encephalitis the phosphates and the sulphates are considerably increased—are noted on p. 173.

1. *Chloride of Sodium, or Marine Salt,*

Is contained in every fluid and every solid in the body, except that it has not yet been found in enamel. The urine of those in *articulomortis*, is almost entirely deprived of it. It is the most abundant of the principles of inorganic origin, and is found during the whole period of existence, even in the ovule.

Its whole amount in the body of the male, is about 277.05 grs.

“ “ female, “ 234.9 “

In human blood the marine salt bears to all the other salts taken together the proportion of 2.4 (even 3) to 1 ; and the proportion is very similar in the blood of other animals. Muscular tissue contains very little of it, and Braconnot found none at all in the heart of the ox.

It exists in a liquid state in every part, except the bones, teeth, and cartilages. It is always dissolved in water, and never chemically combined in any tissue with the peculiar elements of the latter. Thus also it is never found in the organism in an isolated state.

There is three or four times as much common salt in the blood as in the muscles, and more in the urine than in the blood. The proportion in the urine, however, varies with the nature of the aliment ; that in the blood does not. There is a large amount of chloride of potassium in the muscles ; and this salt has very generally been confounded with the chloride of sodium in analyses of the different organs and tissues.

The presence of common salt in the blood is a condition essential to the endosmosis from the alimentary canal into the blood, of alimentary substances dissolved in water, and of the solution of albumen,

and perhaps of the fatty principles. In connection with albumen, it prevents the solution of the blood corpuscles in the serum (p. 197). It is also a condition of the acts of assimilation and *dis*-assimilation; hence the suppression of it in food produces chlorosis, (even in man,) languor, weakness, and paleness, and even œdema. It produces a more abundant secretion, both of saliva and of gastric fluid, and thus facilitates digestion; hence needed most if the food be principally vegetable, or in case of herbivorous animals, since this kind of food contains very little of this salt.

Marine salt enters the stomach in the food and drink; the average daily amount consumed being, according to M. Barral, 4.75 grains in the food, and 109.2 grains added as condiment—more than this amount, however, being used in the latter way during winter. It leaves the body in the urine, the fæces, the sweat, and the mucus.

2. *The Chloride of Potassium,*

Is found in milk, the muscles, the liver, cerebro-spinal fluid, the blood, nasal mucus, saliva, bile, gastric fluid, and the urine. It exists also in the fluid rejected in choleras, and in that of dropsies. In the preceding alone has it thus far been found. It constitutes from 0.4 to 1 part in 100 of muscle; and only .03 to 100 in human milk. In blood the quantity has not yet been specified.

It is always dissolved in water, like common salt. And since in human blood the phosphate of potassa is always accompanied by chloride of sodium, and these two salts may become mutually decomposed into chloride of potassium, and phosphate of soda—the salt under consideration may thus be formed in the body, as well as be introduced in muscle used as food.

3. *The Fluoride of Calcium,*

Is found only in bones and teeth (both the enamel and dentine). Marchand finds 1 per cent. of it in human bone; the quantity in human teeth has not been determined. Berzelius found in the ox 4 per cent. of this salt in the enamel, and 5 per cent. in the dentine. It is not known from what alimentary substances it is derived, how it leaves the body, nor the part it acts therein.

4. *Hydro-chlorate, Carbonate, and Bi-carbonate of Ammonia.*

Nothing is known of the functions of these; and it is not demonstrated that the last two are immediate principles. The first exists in the tears, the saliva, and the urine. Whether formed in the body, or derived from the food, is unknown.

5. *Carbonate and Bi-carbonate of Lime.*

The presence of the latter is only accidental in the human body. The carbonate of lime exists in bones, teeth, cartilages, and the blood. Otoconites are formed almost entirely of it. Traces are found in the ashes of the lungs. It is also found in the concretions (incorrectly termed ossifications) of the muscles, arteries, valves of the heart, in false membranes, around fibrous tumors of the uterus, in the dura mater, and in the pineal body. Preputial, salivary, tonsillary, lachrymal, and certain pulmonary concretions, tubercles (cretaeous and the common form), and certain urinary, biliary, and arthritic calculi, contain this salt. In all cases it is combined with the phosphate of lime. It is sometimes also found in alkaline human urine. Landerer has found it in the crystalline lens affected with cataract.

This salt is found in most of the tissues and the fluids in an amorphous state, *e. g.*, in the pineal gland, or the plexus choroides, &c.; but otoconites are formed entirely of carbonate of lime, in crystals of the rhombohedral form, which is peculiar to it. These crystals are beautifully represented in the atlas accompanying this work.

It is probably in a solid state in bones, teeth, and cartilage, and certainly so in the concretions before mentioned. It is certainly in a liquid state in the blood, but not in direct solution, since water very slightly dissolves it. The chloride of potassium, and the carbonic acid there, may aid in its solution; since both the former, and also a fluid containing the latter acid, dissolve it in a slight degree. In bone and cartilage, the carbonate is doubtless united with the phosphate of lime, before being combined (in company with it) with the organic basis, to form the fundamental organized substance of these two tissues. This organic basis is the "*homogeneous substance of organic origin.*"

Finally, much of the carbonate of lime found by calcination of tissues, &c., whence it is derived, may be formed by this process itself; since all the salts of lime which have a combustible acid (*e. g.* the lactic) are thus converted into the carbonate of lime.

6. *Carbonate and Bi-carbonate of Soda.*

The first of these salts is found in the blood, fæces, saliva; in the urine, when alkaline, without being ammoniacal; and in osteosarcoma. Valentin also found about one-third of 1 per cent. of it in the compact tissue of healthy bone. It is always in the organism, dissolved

in water, and therefore liquid or solid as may be the case with the water itself. In blood it constitutes 0.1628 per 1000, and in fæces .08 per 100. To it is due the alkaline reaction of the blood, the saliva, and the cerebro-spinal fluid (p. 259). It is combined with and dissolves the albumen of the blood, and even prevents the fibrine from coagulating, if the blood drawn from a vein falls into a vessel containing a solution of this salt. It maintains the elasticity and the firmness of the blood globules, conditions without which hæmatisis cannot be secured (p. 261).

A very little of this salt is derived from water and food ; it is almost wholly formed in the body. The malates, citrates, tartrates, and lactates of soda and of potassa, contained in fruits taken as food, are all converted into the carbonate of these two salts respectively, and thus appear in the urine. The hydrogen lost by these acids, on being converted into the carbonic, is said to have been withdrawn by combination with the atmospheric oxygen, to form water, and produce animal heat, a proposition, however, on which theory our authors have already expressed their doubts. The salt leaves the body in the urine, and a portion is also decomposed in the lungs by the pneumatic acid into the pneumate of soda.

The *bi-carbonate of soda* exists nowhere else than in the blood, and there its existence is very probable, rather than demonstrated. It is formed by the action of the carbonic acid in the blood upon the carbonate of soda. Its function is too nearly identical with that of the latter salt to need farther notice here.

7. *Carbonate and Bi-carbonate of Potassa.*

The latter of these two salts is found in the urine of the herbivora, but not in the human body at all.

The *carbonate of potassa* exists in the blood of the herbivora, and of man and the dog, when they consume vegetable food. It does not, however, amount in the former to more than one-third or one-half of the carbonate of soda. It is formed, like the latter salt, from the malate, citrate, tartrate, lactate, &c., of potassa. Its function appears to be very similar to that of carbonate of soda.

8. *Sulphate of Soda.*

This principle exists in very small quantity in the body, but in almost every part and fluid, except the milk, bile, and gastric fluid. It may be found in milk when administered medicinally. Poggiale found 0.44 in 1000 of human blood. It everywhere exists in a fluid

state, dissolved in water ; and conduces to preserve the elasticity of the blood corpuscles, and to dissolve and keep in a liquid state the fibrine of the blood. It is derived probably from food and drink ; and is evacuated in the urine.

This sulphate—and that of potassa—increases in the urine in inflammatory diseases ; while both diminish in chlorosis and chronic maladies.

9. *Sulphate of Potassa and of Lime.*

The first of these is found wherever the sulphate of soda is, they being both dissolved in water and mixed. Simon found three parts in 1000 of urine. Its functions appear to be like those of the preceding salt.

The *sulphate of lime* is said to exist in the fæces, in blood, and in rachitic bones ; but this is not yet certain. It is probably held in solution by the alkaline salts, already described. It is obtained from the water drunk. It is perhaps evacuated in small quantity in the urine ; or is decomposed into some other salt of lime, and one of the sulphates just mentioned.

10. *Subphosphate, or Basic Phosphate of Lime.*

(Phosphate of Lime of the Bones.)

The ashes of every tissue and fluid in the body of man and the mammiferæ, contain this salt ; while some of them have it for their principal constituent, so far as the mass is concerned. All calcareous deposits, as well as many urinary calculi, and phosphatic gravel, contain this salt. We have seen that in all cases this exists where the carbonate of lime does. It is the phosphate of lime which forms most of the calculi around foreign bodies introduced into the bladder, and those of the prepuce ; and which is deposited on instruments left for a time in the bladder. It forms often by itself, or with the ammonio-magnesian phosphate, the urinary sand ; and prostatic calculi are formed of it alone. Uterine and vaginal concretions consist of this, with a little animal matter around some nucleus introduced from without.

The quantity of phosphate of lime varies in different parts. In bones there is 48 to 50, and in enamel even $88\frac{1}{2}$ per cent. ; in dry muscular fibre, .93 to 1 per cent. ; in coagulated albumen (from the blood) 1.8 per cent., and in fibrine (from venous blood) .69 per cent. In the ashes of urine are 2.57 per cent. ; and of solid fæces 12.78 per

cent. But the more a part is submitted to mechanical influences, the more phosphate of lime is deposited. Thus there is more in the bones of the lower than the upper extremities (in the same weight); and less than in either in the more passive ribs. The *eburnation* of bone is an illustration of the same principle. But if this salt increases in the various bones, the others diminish in proportion, and *vice versa*—the proportion of the principles of mineral origin remaining constantly the same at all periods of life, and both in the compact and the cancellated tissue.

This salt is in a solid state in bone, teeth, nails, and hair. Though insoluble in water, it is in a liquid state in the blood and all the other animal fluids, whether in its free state, or combined with albuminous matters. When free, it is in solution by the aid of the free carbonic acid in the blood, of the bicarbonates, or by the chloride of sodium.

In bone it is combined with their peculiar organic substance (os-seïne), and doubtless with the other earthy salts. It is also combined with albumen and fibrine in the blood, as has been seen. In the urine it is held in solution by the acid phosphate of lime and of soda, and the other salts of these two bases; also by the carbonic acid in the urine.

This principle gives to several tissues their physical properties of resistance and solidity, upon which their uses principally depend. This is most apparent in the osseous tissue.

It is derived from milk, and other animal, and still more from vegetable, diet. The phosphate of lime of bones also exists in nature. It is evacuated in the urine. That in the fæces is the overplus in the aliment which had not left the alimentary canal by absorption. A part is, however, changed into the acid phosphate of lime, and then aids in the decomposition of the tissues.

The *acid phosphate*, or *biphosphate* of lime, exists in urine (and in gastric juice?), and is formed, probably, from the basic phosphate.

11. *The Phosphate of Magnesia*

Is found in all the tissues and fluids in the bodies of the mammiferæ; but in all cases in small quantity. It is more abundant in muscle, however, than the phosphate of lime.

It is found in a crystallized form, in the pus of abscesses of different organs, in the serosity of ovarian and other cysts, and in that of the pus of the pleura and peritoneum, and on the surface of carious and necrosed bones. Ovarian calculi are sometimes composed mainly of it, and a small quantity at least exists in all urinary calculi.

In human bone it constitutes 1.16 per cent. ; in that of the herbivora, it is more abundant (2.05 per cent. in the ox). In the varying physiological and pathological conditions, it increases or diminishes with the phosphate of lime. Of enamel it constitutes 1.5 per cent. ; of dentine, 1 per cent. ; of muscle, .023 per cent. Cartilage contains a large amount—even 6.9 per cent. ; and blood, .137 per cent. Human milk contains .05 per cent.

In bone, nails, and teeth, it is probably in a solid state, and combined (as is always the case) with the phosphate of lime. Though slightly soluble, it is doubtless directly dissolved in water. In bone, &c., these two salts, first united together, combine with the plasma to form the organic principle, or osteine.

It is obtained in the organism from vegetable food ; carnivorous animals deriving it from the bones of the herbivora. It is excreted principally in the urine ; the fæces also containing any amount not absorbed from the food, as well as that contained in the intestinal and pancreatic fluids. The formation in the organism of ammonia causes a part of this salt to pass into the state of ammonio-magnesian phosphate, as in the fæces, in cases of typhus and dysentery. The functions of the phosphate of magnesia in aid of endosmosis, and of assimilation and *dis*-assimilation, may be associated with that of phosphate of lime.

12. *Ammonio-Magnesian Phosphate*

Is formed, as just explained, in the fæces in disease, and in the urine after standing twenty-four hours or less ; and sometimes when first excreted, if the urine is alkaline. It may form in any alkaline fluid containing the phosphate of magnesia. It is found in vesical calculi, gravel, and sand, and still oftener in renal calculi ; and in intestinal salivary, uterine, and biliary calculi. In all calculi it is habitually united to the phosphate of lime. It exists in the fluid form only in acid urine, being but slightly soluble in warm water, and in solutions of other salts. It escapes from the body in the fluid (or fæces) in which it is formed. A prolonged use of the phosphate of magnesia (or mineral water containing it) has produced a vesical calculus. This has occurred even in two weeks.

13. *Neutral and Acid Phosphates of Soda.*

The *neutral phosphate* is found in all the fluids and solids of the economy. Urine normally contains both it and the acid phosphate, the former constituting 2.41 parts in 1000 (Simon). In cartilage it

constitutes .92, and in woman's milk, .04 per 1000. It is always, in the body, in a state of solution in water; and this solution becomes a solvent of the insoluble phosphates and the nitrogenized substances. Thus it has properties analogous to the sulphate of soda. It may also replace the carbonate of soda in the blood, and does so in case of a substitution of animal for vegetable food.

It escapes in the urine and the fæces; but in the former is converted previously into the acid phosphate, or into the forms of phosphate of lime, of magnesia, or the ammonio-magnesian phosphate.

The *acid phosphate of soda* has hitherto been found only in the urine. We have seen how it may be formed from the neutral phosphate; the basic phosphate may also exist in the economy, and be converted by the union of carbonic acid into the neutral phosphate and carbonate of soda. The acidity of the urine is probably due to the acid phosphate of soda. There is no *free* acid in fresh urine, except the uric, and this in very small quantity. The constantly-changing reactions of this secretion are owing to the instability of the phosphate of soda.

14. *The Phosphate of Potassa*

Very much resembles, in all its relations, the salts just mentioned. Like the chloride of potassium, it is unfavorable to the exchange of oxygen and carbonic acid, since it destroys the consistence and elasticity of the blood corpuscles; and, like it, is also much more abundant in the muscles than in the blood. Precisely the reverse is true of the phosphate of soda. In the muscles of the calf, it is more than four (?) times as abundant as all the other phosphates taken together. It is derived from vegetable aliments mainly. It has not been found in the urine; but as, if meeting the chloride of sodium, the phosphate of soda and the chloride of potassium will be formed, it probably leaves the body in the form of these two salts.

Second Class of Immediate Principles.

Crystallizable Principles of Organic Origin.

In this class are 45 to 55 substances; 46 having been well determined as existing in the organism. We refer to the table. They are all *definite* compounds, all formed within organized bodies, and exist there only; are mostly rejected from the same, and become injurious if accumulated within it. But though so numerous, they constitute a much smaller part of the body than either the first or the third class, being generally in small quantities. The blood contains about $\frac{2}{3}$ of

them all; and the urine is next in order in this respect. The bile contains several which the blood does not.

They are all in the liquid state in the economy, except stearine and margarine, and perhaps the cholesterine of the brain. Some of them may, however, accidentally become solid, and form concretions; as uric acid, cystine, &c. They are liquid generally by direct solution in water. But stearine and margarine, when liquid, are dissolved in oleine.

Only nine simple elements are found in this class—Sodium, Potassium, Calcium, Magnesium, Sulphur, Carbon, Oxygen, Hydrogen, and Nitrogen. They are conditions of dis-assimilation, as the first class are of assimilation, and represent the amount of chemical elements of the principles of the third class, which had ceased to be a part of the living organism. Hence we shall not dwell on them so fully, as they act only chemically and physically in the body, as they do out of it.

Some of them are converted into other substances before leaving the body, as lactic, uric, hippuric, and pneumatic acid. The last acid was discovered by Verdeil, in 1851. It exists at all ages of life in the organized substance of the parenchyma of the lung. It liberates carbonic acid in the blood by decomposing the carbonates in the latter. The pneumatized soda is also found in the lungs, and in the blood there also. But it subsequently disappears, not being found in any of the secretions. This pneumatic acid has the same relation to the substance of the lungs that creatine has to muscle.

The first division of this class includes the acid or saline principles, twenty-three in number (see the table). With the exception of lactic and pneumatic acids, and the inosate of potassa, these are found in a notable quantity only in the excrementitious fluids, or the urine, or in morbid products.

Of the second division—*nitrogenized, or animal principles, both neutral and alkaloid*—there are only five well-determined substances—Creatine, Creatinine, Urea, Allantoin, and Cystine. These are all purely excrementitious.

Creatine exists in striated muscular fibre alone, of all the tissues (.67 per cent.); also in the blood and the urine, and the liquor amnii. Thus it appears early in life, and persists till death. Lean meat contains more than fat meat; and the heart most of all. It is always in a liquid state, dissolved in water. It is evidently derived from the decomposition of the muscles, and is expelled in the urine as urea.

Creatinine exists in combination with creatine. It is less abundant than the latter in muscles, and more so in the urine. In all organic respects it resembles creatine.

Urea is found in the blood and the urine, in the vitreous and aqueous humor of the ox, in the saliva (?), and in the fluids of the ventricles of the brain, in a case of albumenuria. It constitutes about thirty-eight parts in 1000 of human urine. In diabetes it increases in proportion as the sugar diminishes. Its principal source, certainly, is the decomposition of muscular tissue. It unites with common salt and hydrochlorate of ammonia, and thus forms the *chlorosotate of urea*.

Allantoin has been found in the fluid of the allantois of the calf alone.

Cystine has been found only in the bladder and the kidneys, and only in cases of disease. Nothing is known of the conditions of its formation. It sometimes forms calculi.

The third division of the second class includes the *sugars, or the neutral non-nitrogenized principles*.

Of these there are but two kinds, in animals—*sugar of the liver*, or *diabetic sugar*, and *sugar of milk*. There are several kinds in vegetables, and grape sugar has the same chemical composition as the diabetic. Hence grape sugar, diabetic sugar, hepatic sugar, and glucose, are all synonymous terms, so far as composition is concerned, and are expressed by the formula, $C^{12} H^{14} O^{14}$. *Cane sugar* is $C^{12} H^{11} O^{11}$; and hence grape sugar is formed in the organism (though in small quantities) from cane sugar by the addition of three atoms of water ($H + O$.) to the latter.

1. *Glucose, or diabetic sugar*, exists normally in the parenchyma of the liver, in the hepatic veins, and the portion between them and the heart, of the inferior vena cava; in the blood of the right heart and the pulmonary artery. During fasting, little or none is found in the pulmonary veins, the left heart, and the aorta and its branches; but during digestion it may be found in all these parts in small amount, and sometimes in the general veins also. A very little may be found in the vena portæ during digestion; but never at any other time, unless it be introduced in the food, though it will still be found in the hepatic veins. It never exists in bile in the normal state.

It is found from the fourth or fifth month of intra-uterine life, to the most advanced age. The urine of the foetus in utero normally contains it.

In diabetes, glucose exists in the urine, the kidney, the saliva, the serosity of the pericardium, and that produced by a blister, in the semen (of a dog), in matters vomited, and in the perspiration. Others add the fæces also. But none is found in the brain or spinal cord, the pancreas, nor the spleen. There is much less sugar in reptiles than in birds and mammals, and none at all in the liver of the ray.

Glucose exists in a fluid state in the blood, dissolved directly in water. The contact of organic substances in that fluid rapidly (in twenty-four hours or less) converts it, by catalysis, into lactic acid. In the urine it normally combines with common salt, and thus loses the taste of sugar. In the liver of the higher animals, the sweetish taste is owing to its presence. In some diseases no sugar at all is formed in the body, for a short time before death. An excess of it is one of the signs of a deep general lesion.

Normally, the grape sugar is formed in the liver, from the principles of the organism itself. The parenchyma and the blood in the hepatic veins contain it, though none exist in the food (Bernard). But cane sugar also, entering the vena portæ by endosmosis from the intestines, becomes grape sugar in the hepatic veins, by fixing three equivalents of water. Perhaps the sugar of milk is converted in the same manner. Glucose itself also exists in some articles of food (in cooked starchy substances, grapes, &c.) ; and then, of course, appears first in the blood of the vena portæ, though most of such substances pass merely into the state of dextrine ($C^{12} H^{10} O^{10}$), and which probably becomes glucose in the liver by assuming four equivalents of water.

The glucose actually *formed* in the liver (not derived from food, &c.,) is formed in its *parenchyma*, and not in the blood ;* since in animals bled to death, it still remains in its substance. Anything increasing the activity of circulation through the liver, increases the quantity of sugar, and *vice versa*. Hence, probably, the fact that the condition of the nervous system modifies the amount of sugar (Bernard) ; since this modifies the circulation. Irritation of the medulla oblongata at the origin of the pneumogastric nerve, was therefore found by Bernard to increase the quantity of sugar ; and irritation of its extremities in the lung, by inhalations of ether or chlorine, pro-

* Dr. C. Hanfield Jones has recently maintained that the sugar is formed by the *cells* of the liver, while the bile is secreted by the *epithelial cells* of the hepatic ducts alone.—(E. R. P.)

duces the same effect, by a reflex action to the liver. Hence, in diseases of the lungs or medulla oblongata, diabetes might occur, we may infer.

The changes necessary to convert the cane sugar and the dextrine of the food into glucose in the liver have already been stated. Moreover, Bernard has shown that this change is effected by the pancreatic juice, in the duodenum. But all thus formed passes from the vena portæ into the hepatic vein, and is not formed as in the preceding circumstances, by and in the substance of the liver itself.

The glucose disappears from the blood by being converted, catalytically, into lactic acid, which decomposes the carbonates, and combines with their bases in the blood. But they are soon re-converted into carbonates; and in this form are evacuated in the urine. If there be an excess of sugar in the blood, it will pass off as such in the urine, and perhaps also appear in other secretions.

2. *Sugar of Milk.* (Lactine, Lactose.)

This is found only in milk, and of all the mammalia. It exists only from some point of time after puberty, continues only a few months at a time, and ceases a few months after the last pregnancy. In woman's milk, it forms 3.2 to 6.4 per cent., the colostrum containing even 7 per cent. It diminishes in quantity the farther the date from the previous delivery; being 5.5 per cent. a few days after delivery, it had fallen to 4.6 per cent. five months from this time. Its formula is $C^{24} H^{24} O^{24}$.

It becomes glucose (as does cane sugar) in the liver, and then is finally converted, as before explained, into lactic acid. If this change occurs in the milk itself, it becomes acid.

The parenchyma of the mammary gland *fabricates* the lactine, as that of the liver does the glucose—from what elements is not precisely known. The longer the milk remains in the breast, the less sugar, and other solid principles, and the more water it contains. The kidneys and the lungs are merely *eliminators*, and not *fabricators*.

Taken into the stomach of the infant, the lactine may be converted into glucose by mere addition of water, or by the action of the pancreatic fluid in the duodenum. Or if not thus, conversion occurs in the liver. Its subsequent disposal has already been explained.

Fourth Division of the Second Class.

Fatty Principles, Fatty Acids, and Soaps.

There are twenty to twenty-five bodies of this class. (See the table for fifteen of them.) Cholesterine, margarine, and perhaps

stearine, are sometimes found solid in morbid conditions ; otherwise they are all in a fluid state. The fatty matters are found in connection with all the tissues except teeth and bone ; and the latter enclose them in their cavities. Serum in all fluids (even in urine) contains some of them. They exist in the ovum, and through life ; and in the adult constitute about 5 parts to 100 of the weight of the body. They exist in this proportion in the brain ; $1\frac{1}{2}$ to 4 per cent. in the muscles ; and .16 per cent. in blood. The globules alone contain 3.31 per cent. ; and the serum alone 1.72 per cent. ; the fibrine (when dry) 2.6 per cent.

These principles are united molecule to molecule with *each other*, while all the preceding principles are combined with those of other classes. The exceptions to this assertion are the fatty elements of the brain, and certain fatty acids, soaps, and cholesterine and seroline of the blood. Thus they form little masses, seen under the microscope, and termed "fat globules." They exist in a state of suspension or emulsion, and become a morbid product if increased beyond certain limits. They are smallest in the chyle ; and twice or thrice as large in the blood, *during digestion* ; still larger in milk. They have no envelope. They exist normally in urine, semen, prostatic fluid, saliva, mucus (nasal), synovia, and bile, and the serosity of the pleura of the peritoneum, and that produced by a blister. Several tissues contain them ; the *corpus luteum*, however, more than they all. They abound in cancerous, atheromatous, and other morbid growths.

These are alimentary substances, when taken into the stomach ; and being acted upon by the pancreatic fluid (Bernard), are then absorbed, and may be in part accumulated in the cells of the adipose tissue. Most of the fatty matter is destroyed in the organism, finally taking the form of carbonic acid and water, and maintaining, in part, the organic heat. A part of these substances must enter the body ready formed ; but a part also is formed in the organism, perhaps partially from the hepatic sugar ; or, as Leibig believes, from the metamorphosis of certain nitrogenized substances. Both amylaceous and nitrogenized elements in the food certainly afford the materials for the formation of the fatty principles ; but how this is accomplished is not precisely known. But the *liver forms them*, without doubt (p. 38, vol. 3). Probably, however, they are *also* formed in the tissues where they are found, (*e. g.*, in adipose tissue,) and not wafted to the latter locations in the blood from the liver alone.

Cholesterine is found in the blood, bile, liver, brain, nerves, the fæces, and the crystalline lens, and in many pathological productions.

Its function in the economy is unknown, as is also the manner of its formation.

Seroline is found in the blood only. At what period it first appears there is unknown, as is also its office.

Margarine forms a greater portion of human fat than the *oleine*. Stearine exists in it, but in very small quantity. It does not exist in butter, while the two other principles do. It may be formed, however, in the body from the two others, since in a dog taking butter alone for sixty-eight days, the liver contained a large quantity of stearine, and little or no *oleine* (Magendie). An animal is not nourished by these three principles alone, (lard, butter, &c.,) but is, for a time, by adipose tissue.

Cétine is another name for spermaceti, and is found in closed cavities between the two plates of the cranium of two or three species of whales.

These are the only principles of this division which we notice particularly.

Third Class of Immediate Principles.

Organic Substances, or Coagulable Principles.

Eighteen substances (see the table) are included in this class—fibrine, albumen, caseine, globuline, musculine, ostèine, cartilagèine, elasticine, and keratine, being the most important.

All of this class have *not a definite* and determinate *chemical composition*. They constitute essentially the mass of the organism, and do not go out of it normally; their *materials* only enter and go out constantly, those entering being the principles of the first class already described, and those leaving, the second.

Ostèine and elasticine are not found early in embryonic life; and caseine being an element of milk, is found only in the female, and after puberty. Neither of the preceding principles can be transformed into another, probably; hence no tissue is transformed into another, as cartilage into bone, &c., but the former is *replaced* by the latter (Chevreul).

It has been remarked that these substances constitute a great part of the mass of the body; the weight, however, of other principles may be greater than of these, *e. g.*, that of the phosphate of lime in bones compared with their peculiar organic substance, osteine.

We have hitherto regarded these substances as of definite chemical composition. Our authors insist on the fact that they have *not a*

fixed and definite composition, and even make this one of their peculiar traits. Their composition is constantly varying, though within certain rather narrow limits, the variation rarely exceeding one per cent. in respect to either of the chemical elements entering into their composition. It follows, of course, that the combination of these principles with other substances (as acids, alkalies, &c.,) cannot be *definite* and uniform compounds, *e. g.*, sulphate of copper and albumen being mixed, the salt is decomposed, and its two elements combine with the albumen ; yet the result is neither sulphate of albumen nor albuminate of copper, in definite proportions.* All these substances are of neutral reaction, and all coagulable.

If, therefore, albumen, fibrine, &c., are constantly varying in their own precise composition, much less is it true that these two substances are always of the same composition. And yet two analyses of one of them (*e. g.*, of fibrine) may not be more nearly identical in the results, than an analysis of the former as compared with one of the latter.

Most of the earthy salts—phosphates, carbonates, oxalates, silex, and the silicates—unite with these substances. Hence, whenever concretions are formed by the former, a certain quantity of the organic substances is fixed and retained in them. This union is, however, more feeble than that with the metallic salts, and hence is constantly overcome, and renewed in the acts of assimilation and dis-assimilation. It is from the more intense union of the latter salts with organic matters, that decomposition after death is prevented by some of them, since thus these matters are hardened and contracted. Thus also these salts become the *poisons* called metallic, as those of arsenic, mercury, &c.

Albumen, caseine, and fibrine, are in a *fluid* state in the organism ; musculine, &c., are *demi-solid* ; and the rest (ostèine, &c.) are *solid*. All these may be reduced to a more solid state by evaporation of the water which forms a part of their chemical constitution, and which may be again re-combined, if they are plunged into the fluid. Meantime, however, the tissues containing these substances cease to perform their functions, and if too long dried, or too completely so, the re-addition of water does not restore the lost power. Thus these are not solid substances in a state of solution, but the water is a part of their chemical constitution. Coagulation is, also, merely the passage of a

* Hence the difficulty of distinguishing these substances from each other, by the reactions of mercury, tin, copper, &c.

liquid or semi-liquid substance into a solid state, and not the return of a substance in solution to its primitive solid state ; and the organic substances alone coagulate. When coagulated, they still retain their *water of constitution*, united molecule to molecule now, in the organic matter, as before.

All these substances are *assimilable*, *i. e.*, they do not appear in the urine if admitted into the blood from the alimentary canal, or otherwise, in proper quantity, but disappear entirely from it, and become associated with the pre-existing elements of the same kind in the tissues. The organic substance of bone (*ostéine*), so long as it is associated with the phosphate of lime, will sustain an animal (Magendie). The fluid obtained by prolonged boiling of bone is, however, not capable of sustaining animal life for a long time ; for thus the *ostéine* is converted into *gelatine*, which is not assimilated, but appears in the urine. But none of these organic substances, taken alone, can long sustain life ; the principles of the first and second classes must be added, as mere accessories, but, at the same time, indispensable. In muscle, for instance, the masculine is united, though feebly, with creatine and creatinine, besides the water and the salts. Nor can any principle alone (not even the organic substances) form a substance manifesting a single vital property, as nutritive or reproductive. If the fibrine of the blood sometimes appears to do so, it is because the blood contains the principles of all three classes ; for fibrine alone, though it may form a false membrane (so called), can never become vascular. It has been already shown that the fatty matters are generally combined together, and mechanically disposed in relation to the other tissues, being arranged in their interstices in the form of globules. In the organic matter (*keratine*) of epithelium, nails, horn, and hair, fatty matter exists in chemical combination, and not in the form of globules. These all fall off, however, not being in any degree taken back into the organization after dis-assimilation. This union is, however, a very feeble one. Thus we must distinguish between the organic principles on the one hand, and the anatomical, or rather histological, elements of organism on the other. The latter present the form of membrane, fibres, cells, &c. ; the former have no proper form, and the latter are never constituted of a single substance alone. The simple cell or membrane contains principles of all the three kinds, water always existing in greater or less abundance, besides salts and other compounds. Chemistry alone, then, does not give a just idea of the organic substances ; their examination is a part of anatomy. " It is not carbon, hydrogen, oxygen, and nitrogen,

which directly form the organized substance, but bodies composed of these, which act directly, and which naturally arrange themselves in three distinct classes" (p. 167, vol. 3).

The materials for the formation of the organic principles arrive in the body already formed from the food, etc. ; the organic substance is formed in the organism itself. Those existing in the blood may require little more than an isomeric change of those in the food.

The stages through which these substances pass in leaving the body, after dis-assimilation, are—uric acid, urea, allantoin, carbonic acid, and water. Creatine may pass into creatinine, and appear in the urine ; and albumen and gelatine into laccine.

First Division of the Third Class.

Organic Substances naturally Fluid.

These are fibrine, albumen, albuminose, caseine, pancreatine, and mucosine. These are (with the next division) called *albuminous substances*. Albumen, caseine, and fibrine, have, for several years past, been called the *protein compounds* ; but since protein can be obtained only by a decomposition of them, our authors reject this term. *Gelatinous compounds*, also, are not found to exist, for the same reason, it being only by the decomposition of white fibrous tissue and bone, and of cartilage, that these (viz., gluten and chondrine,) are obtained.

We shall not dwell upon fibrine, caseine, and albumen, since their properties and relations are better understood ; but we will inquire with our authors, in allusion to the theory that all the tissues in the body come originally from albumen, this being the *starting point*, or original pabulum—"why should fibrine or albumen be the radical rather than the organic part of the osseous tissue, of muscle, or of the epidermis?" (p. 182, vol. 3.)

Pancreatine exists only in the pancreatic fluid.

Of *mucosine* five kinds are mentioned :—1, From the mucous membrane of the nares and bronchial tubes, large intestine, and the interior of the uterus ; 2, from the neck of the uterus ; 3, in the urine ; and 4 and 5, from the parotid and the submaxillary glands.

Albuminose has, till recently, been confounded with albumen and caseine ; is liquid, not coagulable by heat, and incompletely so by acids. Is found in blood, and the chyme resulting from the digestion of nitrogenized matters. It forms four to six parts in 1000 of blood. It is formed in the small intestines, by isomeric catalyses probably. Penetrating into the blood, it becomes albumen, and

may unite at once with the solids or fluids requiring it as an organic principle.

Second Division of Third Class.

Solid or Demi-Solid Principles.

These are the most abundant of all the organic substances, viz. : Globuline, crystalline, musciline, osteine, cartilagène, elasticine, and keratine.

Globuline is found only in the blood corpuscles, and constitutes the principal part of their mass—100 to 125 in 1000 parts.

Crystalline is found only in the crystalline lens, and constitutes 35.9 per cent. of it (Berzelius).

Musciline exists only in muscular tissue. It is more abundant in that of the ox and the hen, than in that of the sheep, there being no more than 50 per cent. in the muscle of the calf.

Osteine (or osseine) is found in bone, and also in white fibrous tissue. It is decomposed into gelatine by the action of boiling water. The phosphate of lime in bone is chemically combined with it. It is nutritious, while gelatine is not. Magendie found that animals may be sustained indefinitely by giving them finely ground bones, while they soon languish on soup obtained from bones by boiling them.

Cartilagène is found in cartilages and fibro-cartilages. It is decomposed into chondrine by the action of boiling water.

Thus neither gelatine nor chondrine are immediate principles.

Elasticine is found in the yellow fibrous, or elastic tissue ; the precise proportions are not yet decided.

Keratine is the organic substance found in epidermis, nails, hair, horn, &c.

Third Division of the Third Class.

Coloring or Colored Organic Substances.

Under this head are included : *Hæmatine* (or Hæmatosine), the coloring matter in the blood corpuscles ; *Biliverdine*, in the Bile ; *Melanine*, in melanotic deposit ; and *Urrosacine*, in urine.

Having disposed of the well-established immediate principles of the body of man and the mammiferæ, our authors next consider two *accidental* immediate principles—*nitro-hippuric acid*, and *cane sugar*, and then pass on to the fourth and last book, which treats of principles doubtful, or not well determined ; and bodies not to be regarded as immediate principles at all. We can only give a mere list of these substances, as found in man, as it is only necessary for the anatomist

and physiologist to know them, as not being of any special interest ; though some have hitherto been differently regarded.

Division 1st—Immediate principles of probable or certain existence, but not well determined.

1. Of the 1st Class—Silix.

2. Of the second class—Acetate of soda, leucine, xanthine, hypoxanthine, lienine, two acids peculiar to human urine, hæmatoidine, butryne, buytroléine, phosphorized fatty matters of the brain, cerebrie acid, and cerebrate of soda.

3. Of the third class, the following are probable : Neurine, synovine, or arthro-hydrine, lachrymine, spermatine, organic substance peculiar to dropsical effusions, paralbumine, pyine.

Division 2d—Substances doubtful as immediate principles, though known to exist.

1. Of the first class ; ammonio-sodaic phosphate ; phosphate of ammonia ; ditto of iron ; chloride of calcium, of magnesium, and of iron ; arseniate of lime.

2. Of the second class ; tartrates of iron ; benzoic acid, and benzoates of soda, potassa, lime, ammonia, glyocol ; hippurate and lactate of ammonia ; succinate of soda ; urostealite, xanthocystine, urate of iron, sulphocyanuret of potassium, and of sodium ; formic acid, a peculiar crystallized principle in semen, and butyric acid ; and several others peculiar to several lower animals ; uroglauine ; guanine ; inosite.

3. Of the third class ; phymatine ; hydatidine ; animal substance of calculi ; fibralbumine ; cyanurine ; melanurine ; coloring matter of blue suppurations.

Division 3d—Certain simple bodies whose actual state of combination is *unknown, or not generally indicated*.

This division includes iron, copper, lead, manganese, arsenic, sulphur, and the carbon of the lungs. These are also termed *medical principles*.

Division 4th—Certain natural and artificial chemical compounds which are *not immediate principles*. Only a few of these will be mentioned, and such as are often regarded as immediate principles.

Soda, potassa, lime, alumina, baryta, the three mineral acids, hydro-ferro-cyanate of iron, taurine, bilifulvine, and five acids, said to be found in the bile, dyslysine, purpuric and erythic acids, erythrogene, ethal, glycerine, glycile, and lipyle and their oxides.

Proteine and its two oxydes—epidermose—pegmine—gelatine—

chondrine—diastase (animal or salivary)—pepsine, gasterase, and chymosine—animal cellulose—xantho-proteic acid.

All the preceding are produced by chemical *decomposition* of the immediate principles.

Division 5th—Substances named immediate principles, but which either do not exist at all, or do so as mixtures or products of chemical changes.

These are—

Adipocire,	Gastric Acid,
Cholechorine,	Oonin,
Choleine,	Hæmægonine,
Cruorine,	Hematic Acid,
Kiestine,	Empyreumatic Acid,
Lactate of Urea,	Picromel,
Oxide of omichmyle,	Xanthose,
Blue, brown, and yellow pigment of the blood,	Uroxanthine,
Biliary resin,	Albuminate of Soda,
Koprikine,	Hydrochlorate of Uryle,
Osmazome,	Albiperle,
Zomidine,	Hæmaphacine,
Bubuline,	Subrubrine,
	Ouretic Acid.

If it be thought by the readers of the MONTHLY that we have extended our notice of the preceding work beyond the required limits, we excuse ourselves by the remark that, in our judgment, the publication of this work forms an era in the application of chemistry to physiology, pathology, and histology. It is the first work on *anatomical* and *physiological* chemistry, as distinguished from *organic chemistry*, and will therefore take the lead in establishing a new and improved school of chemistry in its aspects and relations most important to medical men.

E. R. P.

PART III.—PROCEEDINGS OF SOCIETIES.

NEW YORK PATHOLOGICAL SOCIETY.

Jan. 10. *Dr. Clark* presented a specimen of parasitic vegetable growth removed from the ear of a lady, æt. 60, by *Dr. Kissam*. The ear had been syringed, after emollient applications, for the removal of a suspected accumulation of inspissated cerumen causing deafness. The edge of a white membrane presenting, *Dr. Kissam* was able to withdraw by the forceps what seemed to be a white membranous lining of the whole lower external ear. It was moulded to its walls,

having on its surface an impression of the bones of the tympanum. On its removal the hearing of that side was very much improved. The other ear was to receive the same treatment. (See minutes of meeting Jan. 24th.) On microscopic examination, the mass of the membranous accretion was found to consist of a vegetable product, belonging to the same general class as the *oidium albicans* described by Dr. Clark at the meeting of this Society, Jan. 25th, 1854, yet unlike it in being unicellular, or at least composed of cells of unusual length. The stem was somewhat branched, and the spores appeared to be more or less vested in the epithelial cells. Dr. Clark thought that the plant probably grew from the epithelial lining of the external ear. He believed that a vegetable growth in the ear had not before been recognized as a cause of deafness.

Dr. Clark also presented a mass of fibrous tumor, weighing several pounds, springing from the fundus and body of a uterus. The woman from whom the specimen was taken died suddenly, and the partial history of the case obtained was of no value.

Dr. Dalton showed a malformation of the heart from a male infant, in which the organ had but two cavities, one auricle and one ventricle. The case occurred in the practice of Dr. H. W. Brown. The infant was the fifth child of its mother, but the first by a new husband, the mother having married a second time. All the other children were perfect, with the exception of the first, which was born before its time, and lived but a few hours. The infant from which this specimen was taken was born at full time, and had no other malformation. It appeared quite well for eighteen hours after birth, except for some coolness of the skin. It then began to show signs of distress, which were attributed to flatus. It grew constantly cooler at the surface, and more dark colored about the face, and died without any other remarkable symptom about twenty-four hours after birth. The heart was of natural size, and nearly of natural shape externally, but on being opened it was found to consist only of the right auricle and ventricle, the left cavities being entirely wanting. The blood passed out of the right ventricle, through the pulmonary artery, which sent two small branches to the lungs, and then continued onward by the ductus arteriosus as a large trunk to the arch of the aorta. Part of the blood then passed down through the thoracic aorta, and part returned in a backward direction through the aortic arch, which, after supplying the head and upper extremities, returned to the heart and terminated in the coronary arteries.

[This malformation is of great value in connection with Professor Peaslee's explanation of the course of the foetal circulation, as stated in his paper published in the Number of the MONTHLY for May, 1854, (vol. 1, p. 321). If we mistake not, this heart will be found to corroborate the positions there taken. These, though distinctly stated and logically maintained, do not seem to have attracted that attention to which such a topic is entitled, and which must show a great error in the explanation of these phenomena, as taught from most anatomical and obstetrical chairs. If it had come from the other side of the Atlantic, it would have been at once received to the rank to which it is entitled.—ED.]

Dr. Dalton also exhibited a horny epidermic growth from the forehead of a man about twenty-five years of age, which had been removed by Dr. Detmold. The horny protuberance is a quarter of an inch long, of a brownish color, and fissured longitudinally. Its base was seated in an enlarged cutaneous follicle.

Dr. Sayre exhibited a portion of the walls of the abdomen of a patient, into whose peritoneal cavity he had introduced a lead seton, for the purpose of producing adhesion of the walls of the cavity in a case of ascites dependent on organic disease of the heart, also a portion of the intestines, which were agglutinated by recent lymph. The most serious symptoms caused by the accumulation were relieved by the operation, but the patient died with diarrhœa. The autopsy showed that general peritonitis with adhesion had been excited by the seton, but that there had not been a sufficiently free exit to accumulating fluids. Dr. Sayre thought that it would have been better to have left in a canula, as in Dr. Hart's recent operation. Dr. Sayre had operated once before in similar circumstances. The man was greatly oppressed by the accumulation of serum from organic disease of the heart. Having drawn off twelve quarts of fluid, he introduced a lead seton, and made incisions over the malleoli. In twelve days, sixteen quarts of serum escaped by these incisions. Peritonitis having been excited in a mild degree by the seton, no reaccumulation in the abdomen took place. The patient got about and is now living in moderate health. A history of the first case was furnished for the archives of the Society.

Dr. Clark inquired as to the result of puncture of the abdomen, for the removal of serous fluid when the wound has not been closed. His experience had been that the operation led to unpleasant results, in a large proportion of cases. Dr. Clark thought that the function

of the bowels was apt to be impaired when general agglutination took place, and that this was an objection to the introduction of a foreign body like the seton, which would excite adhesive inflammation.

Dr. Sayre considered the result of the operation as the less of two evils. In answer to *Dr. Batchelder*, he stated that the bowels of the first patient mentioned were regular for ten days after the operation, and until diuretics were administered, when diarrhœa set in.

Dr. Conant suggested that the cul de sac of the vagina, where the peritoneum is reflected from the rectum was a suitable point for puncture of the abdomen in cases of accumulation of fluid.

Dr. Sayre thought the wound would generally heal. He inquired the result of operations for dropsy by injection of the abdomen.

Dr. Cochran alluded to a case reported by *Dr. Otto Rotton*, of a case of ascites of twenty years' standing cured by the injection of Tr. Iodine.

Dr. Emmet exhibited a heart with the following history: A female, a native of Ireland, æt. 30 years, was admitted to the Emigrants' Hospital, Ward's Island, November 30, 1854. On admission, the face, body, and lower extremities were very œdematous with effusion into the peritoneal sac. The left side of the chest was dull on percussion; at the spine of the scapula the respiratory murmurs could be heard, although very feeble; the resonance on the right side nearly normal. The lung was somewhat œdematous; there existed an extensive effusion in the pericardium; the right ventricle was hypertrophied, and dilated, with tricuspid regurgitation; the heart's impulse very feeble, with a double murmur over the apex. Pulse 120 per minute, small and feeble. She died December 28th, 1854. Post-mortem examination made forty-eight hours after death. Effusion very great in the left pleural cavity, with the lung compressed nearly one-half its normal size, and firmly bound down on its posterior surface with a dense band of fibrine about an inch wide, extending from apex to base. The pericardium contained about a pint of fluid; the right ventricle was dilated. The mitral valves were glued to the side of the ventricle so as to form a complete tube; the other organs healthy.

Dr. Isaacs described an instance of *enchondroma* in a negro, connected with the knee-joint. A tumor was noticed in the popliteal space half the size of a hen's egg; the popliteal artery and nerve were found stretched over it. It was enchondromatous in its structure, and was attached to the posterior ligament of the tibia. There were

several smaller masses disengaged, from the size of a shot to that of a pea, and another, very firm, connected not only with the cartilage of the tibia, but even the substance of the bone itself.

Dr. Sayre thought these growths to be, probably, the result of inflammation of the joint, as in two instances when he had opened joints where ulcerative disease existed, the loss of substance was repaired by material similar to this, so far as could be determined by the eye and probe.

Dr. Finnell exhibited three atrophied infants, and stated that similar cases came under the notice of the coroners very often. They are found only in the poorer districts of a city ; are fed on tea, coffee, and bad milk ; are teased with vermifuge medicines, and generally die in convulsions. On examination, *post-mortem*, the head is found enlarged, weighing generally as much as the body, with considerable serous effusion in the ventricles. If the children are under six months' old, there is no sign of disease, except atrophy ; no fat is found, except in the orbits and under the malar bones. At one year of age, there is enlargement of the cervical glands ; and after one year, generally tubercles. *Dr. Finnell* said he considered the effusion into the ventricles as anæmic, and not inflammatory effusion. The parents were generally healthy. *Dr. Finnell* exhibited a specimen of internal strangulation of the small intestine. The patient, a man, æt. 27 years. He was well until forty hours before death, when he was attacked by cramps and pain in the bowels ; he took brandy and peppermint, and went to bed. The same night he took castor oil, but with no relief. Other cathartics were administered, but were vomited. Five hours before death, he spoke of feeling better. At the autopsy, about two feet of the ilium was found to be passed under the sigmoid flexure of the colon, when the peritoneum was deficient at the upper part of the rectum, and then twisted on itself.

Dr. Batchelder thought the stethoscope would assist in the diagnosis of internal strangulation of the bowels. He is able to trace peristaltic motion through the whole course of the bowels ; can hear the contents of the bowel drop through the ileo-cæcal valve, and can detect obstruction of the bowel.

Jan. 24, 1855. *Dr. Clark*, in connection with the cases of atrophy and deaths from inanition, presented by *Dr. Finnell* at the last meeting, read statistics showing the great increase of mortality in children under five years, the deaths being at the present time nearly twice as great as fifty years since, in proportion to the population of

the city. He thought the matter demanded careful inquiry, and should be submitted to the City Authorities.

Dr. Holcomb moved that Dr. Clark be requested to draw up a statement in accordance with these facts, and that the same be presented to the Corporate Authorities.

Dr. Clark presented the adventitious growth, removed by Dr. KISSAM, from the ear in the case narrated by him at the previous meeting. The same appearance existed as in the other, with the exception of the under surface being covered with cerumen; the sense of hearing was entirely restored. Dr. Clark also presented the heart, lungs, aorta, and trachea of a man, who was an inmate of Bellevue Hospital, laboring under aortic aneurism. The disease was recognized; the aorta could be distinctly felt pulsating; there was no *bruit*. His health was tolerably good, being at times subject to attacks of dyspnoea. In eight months the tumor was not much increased; the attacks of dyspnoea became more frequent and prolonged; and during one of these paroxysms he suddenly died. Ten days previous to his death, he raised blood copiously. *Post-mortem* examination revealed aneurism of the aorta; the clot was of considerable size, tumor adhering to the sternum. On the posterior face of the aneurism was the trachea, in which were two ulcerations communicating directly with the aneurismal tumor. Several smaller ones were on the trachea, which apparently began on the mucous membrane. The lungs showed well-marked appearances of pulmonary apoplexy; scattered over their surface were masses of various sizes, of a dark, red color, occupying two-thirds of the lung tissue. Dr. Clark also exhibited a kidney, which, to the eye, seemed perfectly healthy, but on microscopical examination showed its substance filled with fatty globules, small, but numerous. He cited this as an illustration of the fact that the unassisted eye is not always sufficient to detect disease of this organ. Dr. C. exhibited for Dr. MATTHEWS the brain of a man who became suddenly insensible in the street a month since. On recovering from this condition, it was found he was paralyzed on the left side. He continued in this state, scarcely ever speaking, doing whatever he was told, being nearly half-stupefied. Two days previous to death, he became comatose.

Post-mortem examination showed the existence of a moderate-sized clot in the right lateral ventricle, over the optic thalamus. The clot had lost its dark color. The small additional effusion, which probably occurred two days previous to death, was doubtless the immediate cause of death.

Dr. C. also exhibited for Mr. Trenor the brain of a man, inmate of one of our charities, who was not regarded very sick ; he was employed in working about the institution. On Thursday last, he was disinclined to work, and there was observed unusual brightness of the eye. On Saturday, the same state continued ; at night he was very wakeful, and towards morning reported as dying. He could give no account of himself ; no pulse could be felt. Croton oil was administered, which produced several operations. He gradually became comatose, and died on Sunday. *Post-mortem* examination gave evidence only of intense redness, blood being effused under the arachnoid membrane.

Dr. Holcomb mentioned two or three cases seen in Dr. Wild's practice, similar to the foreign growths removed by Dr. Kissam from the ear of a lady.

Dr. Peaslee remarked it was a matter of much practical importance and interest, whether a vegetable growth alone, and independent of a diseased state of the cuticle, could cause deafness ; for if so, the sulphurous acid gas, well known to be destructive of all the fungi, would cure it.

Dr. Conant presented a heart and arch of the aorta, taken from a female, whose history he ascertained to be as follows : Two years since, she had pleurisy on both sides, from which she never fully recovered. Seven months since, she was delivered of a living child, and a month after the event, was attacked with pain in the cardiac region, accompanied with severe palpitation ; these attacks recurred daily until her death. In a debauched state she was received at the Penitentiary Hospital, and placed in the ward of delirium tremens, where she remained four days, and was then transferred to the pulmonary ward. Being exceedingly nervous, and complaining with symptoms that pointed to the uterus as the seat of the difficulty, an examination was made, and metritis with vaginitis was found to exist, with profuse muco-purulent discharge. This condition of the parts was thought to account satisfactorily for the nervous symptoms ; still the cardiac difficulty increased in severity, and an examination was instituted by a careful diagnostician, who discovered a peculiar rough sound produced by the blood driven through the aortic valves, together with hypertrophy of the heart. *Post-mortem* examination showed the heart slightly hypertrophied, but the valves quite normal. Atheromatous deposit was found in the inner coat of the aorta, to some extent over the whole arch. Dr. C. asked if this might not account for the rough sound heard during life.

Dr. Clark thought that there was hardly deposit enough to pro-

duce any marked abnormal sound, save perhaps a *bruit* from slight dilatation of one of the valves.

Dr. Peaslee presented two uteri with the related parts, showing the effects of pelvic abscess.

The first was from an Irish woman, unmarried, æt. 24, of very fair complexion, who fourteen weeks before death was under treatment in the country, by a physician, who told her that she had disease of the uterus. Six weeks before death she was attacked with dysentery, as was believed, and two weeks after this, was admitted into the Cholera Hospital, under supervision of Dr. D. J. Conant, to be treated for cholera. The symptoms of that disease were soon relieved; but she died in four weeks with continued symptoms of dysentery. On *post-mortem* examination, the colon was found intensely inflamed throughout. The present specimen shows the uterus anteflexed and inclined to the left, and the rectum at its upper part depressed and inclined to the right. The cavity of an abscess exists under the right fallopian tube and ovary, extending behind the displaced uterus (the abscess being doubtless the cause of displacement), and opening into the rectum at its upper extremity, this being drawn down and displaced to the right, as already described. The right ovary is atrophied to less than half its usual size, but not structurally implicated in the abscess.

The second specimen was obtained from a subject on the dissecting table; nothing being known of the case except that the woman died in a jaundiced state, and had a fatty liver, as well as the pelvic abscess about to be described.

A large abscess is found to have almost destroyed the substance of the left ovary, and this had discharged by several small openings, apparently, into the *cul de sac* between the uterus and rectum. Inflammation of the peritoneum then ensued; the effect of which was to glue the small intestines in a mass across the pelvis, and thus roof over the *cul de sac*, and prevent the matter escaping among the convolutions of the alimentary canal. Finally, the matter, though confined, had been discharged through an opening four lines in diameter, into the vagina, at the bottom of the *cul de sac*, and through two smaller openings into the rectum, also three and a half inches above the anus. A layer of exuded plasma still covered all the surfaces, forming the boundaries of the cavity in which the matter had passed from its original place of formation.

Dr. Peaslee remarked that these specimens had presented to him several points of interest. He had seen five cases of pelvic abscess

in the past nine months, with whose history he was familiar. The patients were all females, four of them being unmarried, and the other (æet 36) not having borne a child for the last seven years. In all, the disease dated from some unusual exposure at the time of the catamenial flow. In every case symptoms occurred which might naturally have been attributed to dysentery alone, had the true nature of the disease not been ascertained; and in every case matter had been evacuated by the rectum. In one case it was said to have been passed from the vagina also; but from the very frequent mistake of mere vaginal, mucous, or a common leucorrhœal discharge (purulent or otherwise), for matter discharged from an abscess, we may doubt if this was the fact. The second specimen just shown demonstrates the possibility of a discharge through both the rectum and vagina at the same time. The discharge in the five cases occurred in from three to five weeks after the first inflammatory symptoms were developed. We may learn practically from these specimens the propriety of seasonably opening a pelvic abscess either from the vagina or the rectum, according to circumstances, so far as its mere evacuation is concerned. And in this point of view merely, it should be opened from the one of these two canals, in which fluctuation is most distinct, or in which the parts to be divided are the thinnest.

There is another point of view, however, in regard to which the point selected for opening is of very great importance. He alluded to the ultimate effects of spontaneous opening into the rectum in producing stricture of that canal. In three of the five cases alluded to, a stricture occurred in consequence of the opening into the rectum. In one of them Dr. P. was at first led to suspect schirrus; but the treatment adopted has removed all suspicion of any malignant disease. In another case, now under treatment, he would have made the same mistake were it not for his previous experience. In this last case the stricture would not allow a No. 7 catheter to pass through it. Dr. P. divided it freely with a bistoury, and now (at end of two weeks) it admits a bougie one inch in diameter. In these three cases the stricture commenced within four inches from the anus. With a view to avoid the ultimate effect of a pelvic abscess discharging into the rectum, Dr. P. thought it better, if fluctuation could be felt from the vagina, to withdraw the matter through that canal. A stricture would be less likely to form, doubtless, if an abscess were seasonably opened than if left to open spontaneously; but if a stricture is to occur, it would, under most circumstances, be desirable in the vagina rather than in the other canal. While suggesting this

operation, instead of the opening from the rectum, Dr. P. would also say, in regard to the suggestion made by Dr. Conant at the last meeting (as Dr. P. was not then present), to open from the vagina in some cases of ascites, instead of the usual operation through the linea alba, that a patient of which he had the care, in part, had been tapped five times in this way; and that the puncture through the *cul de sac*, between the uterus and rectum, had always healed at once, without the least difficulty—the patient having been kept in bed four or five days after the operation. At one of these tapplings 106 lbs. of fluid had been withdrawn, and 103 at another.

Dr. Finnell presented the stomach of a man, æt 24, of robust constitution, who had been drinking excessively for the last ten days. At 1 p. m. to-day he was found dead in bed. The stomach was found intensely injected with abundant, thick, tenacious mucus, and much contracted.

Dr. Clark remarked that, from his observation, it was “raw rum” only which caused intense, red congestion, similar to the specimen before the Society. He doubted if it was inflammation, and thought the appearance would have subsided had he lived twenty-four hours longer. Evidences of gastritis rarely existed after hard drinking.

Dr. Cox mentioned a patient under his treatment who had indulged freely in drinking. He vomited blood; no tenderness of stomach existed. He thought that it was not inflammation, but simply congestion.

Dr. Peaslee considered vomiting of blood as the best thing that could happen, as a means of relieving the inflammation.

Dr. Clark observed that the “rum stomach,” so called, was only induced by the continual irritation of frequent stimulants, and that the cause of congestion must be repeated to cause this appearance.

MEDICAL SOCIETY OF THE STATE OF NEW YORK.

The Medical Society of the State of New York held its Forty-Ninth Annual Session in Albany, commencing Tuesday morning, February 6th.

There was a larger number of delegates present than had ever before attended the meeting of this Society. The city of New York sent few representatives, while the county societies, by the number of

their delegates, showed an increased interest in the proceedings of the State Society.

Dr. Charles B. Coventry, of Utica, the President, read his inaugural address, in which he gave a brief history of the rise and progress of the Society, and congratulated those interested in the gradual increase in the numbers attending its session, the interest felt, and the influence held and exerted by the Society over the members of the faculty throughout the State, and in the Legislature, upon all subjects relating to the profession.

Previous to 1806, when the State Society was organized by act of the Legislature, all persons who practised medicine were required to obtain a license from a Judge of the Supreme Court. This, then, was the first action of the government, authorising the members of the profession themselves to admit students to the practice of medicine, and, as the charter was worded, "to regulate the practice of physic and surgery in the State."

The President was glad to observe that the county societies were regaining their former position and activity, which had been effected by the act of the Legislature abolishing all penalty for practising without a license. He thought there was a general misunderstanding as to the tenor of this act—that it did not materially affect the profession, nor diminish in the least any of the rights and privileges of the county societies, but referred more particularly to those out of the profession. On account of this misapprehension, the county societies had been neglected, and many voluntary associations had arisen. While he approved of the latter, as keeping up a proper professional feeling, and fostering a friendly intercourse among its members highly beneficial to themselves, and of great interest to their patients, he thought they should not supersede the county societies, which were their legal representatives, while the former had no authorized legal powers.

Reference was made to the epidemic cholera of the year—to its wide extent, frequenting equally town and country—its amenability to treatment when early visited—and the absence of panic in the community, which was greatly owing to the assurances from the profession that no disease was more tractable if treated in its early stages, and to their gradually becoming familiar to its appearance.

A highly complimentary notice was made of the recent excellent report of the Sanatory Commission of New Orleans; and with a lengthy extract from this report, upon the origin and communicability of yellow fever, the President closed his inaugural address.

Dr. Armsby, of Albany, exhibited the specimen of extra uterine conception presented to the society last year by *Dr. Parkhurst*, neatly prepared and preserved for demonstration, and read a paper upon the subject, giving a report of many similar cases. *Dr. Armsby* had found in his extended researches but three reported cases where the foetus had been carried a longer period than the subject of *Dr. Parkhurst's* paper.

Dr. Phelps, of New York, read a short paper upon the reduction of dislocation of the femur, by the method proposed by *Dr. Reid* of Rochester, and claimed by him as original. In last year's proceedings, *Dr. Shumway* reported a case treated in a like manner, and gave the credit of priority to the late *Dr. Nathan Smith*. *Dr. Phelps* gave an abstract of his notes, taken while attending lectures in Philadelphia, in which a dislocation is noticed as having been reduced by *Dr. Philip Syng Physic*, at the Pennsylvania Hospital, by the same method, as early as 1810-11, which is five years earlier than the date of the operation performed by *Dr. Nathan Smith*, as reported by *Dr. Shumway*.

Dr. Monell, of Newburgh, exhibited two specimens of dissecting aneurism of the aorta, both occurring in negroes, giving a verbal account of each. *Dr. Monell* also read a paper upon a remarkable case of insanity.

In the afternoon session reports were called for from the various committees, and others appointed to report upon special subjects.

Dr. Monell, appointed to report upon the epidemics of the second senatorial district, read an interesting paper upon the epidemics which prevailed in Orange county during the last year, which paper was referred to the Committee of Publication.

Dr. Frank H. Hamilton, of Buffalo, gave numerous extracts from a lengthy and well-digested paper upon dislocations, especially reviewing and illustrating the subject of luxations of the femur before referred to, and commenting upon the frequency of surgical jurisprudence in the western part of the State.

Dr. March, of Albany, read extracts from various medical journals commenting upon an operation he had performed for the removal of a tumor of the neck. As he had been censured in several quarters, he would give a detailed account of the whole operation, the character of the tumor, its location, and the reasons which induced its removal. The various causes of death which had been assigned he reviewed, and gave it as his opinion, as well as of the physicians who were in attendance, and were the witnesses and actors in the operation, that

death resulted from three causes :—1, Loss of blood ; 2, shock to the system ; 3, introduction of air into the venous circulation.

A part of the morning of the second day was occupied by the reading of short biographical notices of several deceased members of the society.

Dr. Snyder read a biographical sketch of the late Dr. Daniel Ayres, of Amsterdam, Montgomery county.

Dr. Coventry read a short biographical sketch of the late Professor James Webster, of Geneva Medical College, who died at Louisville, July 18, 1854.

Dr. John S. McCall, of Utica, read a paper on the needs, duties, and privileges of the medical profession.

Dr. Phelps, of New York, presented a paper upon the early and present condition of the medical profession.

Both of these papers were referred to the Committee of Publication.

Dr. Augustus Willard, appointed to report upon the epidemics of the sixth senatorial district, read a paper upon the epidemics of Chenango and Brown counties. It is to be regretted that the rest of these committees did not report, and it is respectfully urged that the circulars sent out by the persons appointed may be responded to by all, so that the reports may be full and complete. By so doing the printed transactions of the State Society will become a valuable documentary history of the epidemics in our state, and the value of the society be immeasurably increased.

Dr. Brinsmade, of the third senatorial district, promised a full report of the epidemic cholera as it appeared in Troy, drawn up by himself and Dr. W. P. Seymour, the Health Officer. This report was not ready, but would be placed in the hands of the Committee of Publication, by order of the Society.

Dr. Foster of New York offered the following, which, after an animated discussion by Dr. Bradford, of the State Senate, Dr. Staats, Dr. Burr, and Dr. Foster, was laid upon the table :—

Whereas, the Legislature are about to provide additional accommodations for the insane : this Society deem it a fit occasion for the expression of its opinion : Therefore,

Resolved, That an Asylum capable of accommodating two hundred and fifty patients is preferable to one of a larger size.

That the selection of a proper location for an Asylum should be made in view of the construction of such a number of Asylums of that magnitude as the present and future wants of the State may require.

That the site of a Lunatic Asylum should unite, so far as it may be found possible, the qualities of salubrity, protection from cold winds, agreeable scenery, proper drainage, cheapness of living, ease of access by railroads, and such proximity to a large town as will facilitate frequent inspections.

Dr. Hamilton finished the reading of his paper on dislocations, commenced the day before.

Dr. Corliss, in connection with the subject of surgical jurisprudence, remarked that in transverse fractures of the femur, there will *always* be shortening of the limb, and he thought upon this all legal decisions should be based.

Dr. March closed the morning session by reading a paper upon the operation for hare-lip, and exhibited a new forceps he had invented for this operation.

The afternoon session was set apart, by a vote taken in the morning, for the election of officers, but upon motion of *Dr. Staats*, the order of business was suspended, to allow *Rev. Mr. Warren*, of the New York Temperance Society, to address them for a few moments.

The *Rev. gentleman* wished to call the attention of the members of the Society to the circular of the chairman of the Select Committee of the Legislature "upon so much of the Governor's Message as relates to intemperance," and especially to the inquiries addressed particularly to the faculty, as follows :—

Does the regular and continued, though moderate, use of alcoholic liquors, *as a beverage*, render the human system more liable to attacks of disease ?

What diseases are usually aggravated, or rendered more difficult of cure, by such use of such liquors ?

Do intoxicating liquors, used as a beverage, have such an influence on human passions as to justify the conclusion that their use tends legitimately to the commission of crime ?

Dr. Geo. W. Bradford of the State Senate, then offered the following resolution :—

Whereas, *Rev. C. J. Warren*, Corresponding Secretary of the New York State Temperance Alliance, has presented to this Society several inquiries as to the influence of intoxicating drinks in aggravating or inducing disease ; and whether such drinks do so excite evil and malevolent passions, that they may be said to lead naturally to the commission of crime ;

Resolved, That this Society deem these inquiries important and timely ; and that we recommend the members to co-operate, to the extent of their convenience, in obtaining and diffusing the information desired.

This resolution, seconded by Dr. Phelps, of New York, and sustained by Dr. Hiram Corliss, in a sharp, pungent, and impressive speech, was unanimously adopted by the Society.

The election of officers then took place, which resulted in the choice of—

Dr. Frank H. Hamilton,	of Buffalo,	for President.
Dr. Thomas Hun,	of Albany,	“ Vice-President.
Dr. Howard Townsend,	“	“ Secretary.
Dr. Peter Van O’Linda,	“	“ Treasurer.

The gentlemen whose names follow were elected permanent members :—James R. Wood, B. Fordyce Barker, Philander Stewart, G. C. Monell, Alfred Watkins, Ebenezer Steel, Freeman Turtelot, Henry C. Gray, Luther Gutieau, A. L. Saunders, Marcena Terry, A. B. Case, John Coventry, Edson Carr, Autin Flint, John B. Coats.

Dr. Horace A. Buttolph, of New Jersey, and Marshall Hall, of London, were elected honorary members of the Society.

In the evening the President delivered his annual address, in the Assembly Chamber, which, by resolution presented by Dr. Corliss, was requested for publication.

During the session of the third day, the following gentlemen were elected to be recommended to the Regents of the University, for the Honorary Degree of Doctor of Medicine :—J. Kneeland, James L. Phelps, A. Churchill, Edson Carr.

Dr. W. S. Norton read a paper on injury of the shoulder joint.

Dr. Horace Green, of New York, read a paper on the employment of injections into the bronchial tubes, and into tubercular cavities of the lungs. This paper was the continuation of the subject, as presented to the readers of this Journal in the January No., giving more extended notices of the cases there reported, with the continued good results of the treatment in these and other cases.

The resolution offered by Dr. Foster, relative to lunatic asylums, was called up, and after some discussion, was so amended as to read :

Resolved, That this Society is deeply impressed with the importance of further accommodations for the treatment and care of the insane of our State, and they therefore respectfully urge upon the Legislature the speedy passage of the measure now before them for the purpose.

Dr. Chas. A. Lee was requested to furnish an abstract of his “ Review of the Trial of John Hendrickson, Jr.,” for insertion in the Transactions of the Society.

The Society, after passing a vote of thanks to the Common Council and the Assembly, for the use of their chambers, adjourned *sine die*.

PART VI.—EDITORIAL AND MISCELLANEOUS.

NOTICE TO PUBLISHERS AND AUTHORS.—We frequently receive notes saying that a package has been sent to the MONTHLY in a case to some bookseller of this city. It has been our custom to send for such packages, but there is so much inconvenience attending it, that we must ask publishers to have their books sent to our publisher, Mr. F. P. Allen, No. 9 Spruce street. It should be distinctly understood that we consider the indebtedness, if there be any on either side, to be on the part of publishers, not on that of the MONTHLY, and we shall not consent to be regarded in any sense as beneficiaries.

QUARANTINE REMOVAL.—Petitions have gone up to Albany from the Staten Islanders, asking for the removal of the Quarantine Hospital. A strong push will be made in the House to secure some action upon this matter. It involves the whole question of the necessity or the nuisance of Quarantine regulations, as well as the very delicate one of location for the offices that secure them. The public would enjoy a word on the subject from the parties who are so willing to serve themselves and us in the capacity of Health Officers. What think our humble servants who dance attendance about the Governor's room? Are they for or against a removal? Are they skeptical as to the value of strict Quarantine regulations? or are they faithful believers in the old theories? ††

EMIGRANT PASSENGERS' RELIEF.—Senator Fish last season introduced a bill to prevent repetitions of the awful mortality on emigrant ships which prevailed last year. It was thought to bear rather hard upon portions of the shipping interest; so it was referred to a Select Committee for amendment. During the month of January the amended bill has been introduced to the Senate.

It promises to do much towards effecting the object in view. It requires that larger accommodations than heretofore shall be left to passengers; obliges shippers to provide ampler and better food; compels Captains to give out the food, cooked, at certain hours of the day; affixes heavy penalties for omission to perform any of the duties named; and, most important of all, gives Captains the power to compel order and attention to decency on ship-board. Hitherto, if an intelligent Surgeon asked the officer's aid in obliging a stupid emigrant to come out on deck, and give opportunity to have his filthy

quarters cleansed, the officer could second his intentions only at the peril of involving himself in a suit for assault and battery. The bill does not overlook the necessity of full inspection of ships—though, unfortunately, the inspection provided for is at the beginning, instead of the end of the voyage, when it would be more likely to detect abuses—or of full returns of the particulars of any deaths that may occur. It would have been still better if a larger portion of the food ordered had been of a nature to leave no irregularity of meals, in case of a storm of unusual severity and duration; but as it is, the bill is an excellent exchange for the present disgraceful system. Senator Fish merits thanks for his humane and unwearied attention to this matter.

††

ITEMS.

It has been charged in our City dailies, that the popular sickness is greatly increased on Sundays, and that some of our druggists are called upon for enormous amounts of “something warming,” to relieve sudden attacks experienced by red-nosed visitors, since Mayor Wood has stopped the Sunday sale of liquor. The bills of mortality do not show that the attacks have in any case proved fatal.

The Boston *Telegraph* says that gum-drops which hold a thimbleful of brandy are fashionable in the restaurants of the Literary Emporium.

Dr. Lionel Beale has published a hand-book on *The Microscope, and its application to Clinical Medicine*.

In the Journal of Psychological Medicine for January, Dr. FORBES WINSLOW has a lecture on Medico-Legal Evidence in cases of insanity. Remarking that the proof of extreme eccentricity is not sufficient to induce the Ecclesiastical Court to set aside the will of a testator, the case of *Morgan vs. Boys* is quoted, as in point:

“The testator in this instance died, leaving by his will a large fortune to his housekeeper. The will was disputed by his relatives, on the ground that it bore intrinsic evidence of his not having been in a sane state of mind. After having bequeathed his property, the deceased directed that his executors should cause some part of his bowels to be converted into fiddle-strings, that others should be sublimed into smelling salts, and that the remainder of his body should be vitrified into lenses for optical purposes! He further added in a letter, ‘The world may think this done in a spirit of singularity or a whim;’ but he expressed himself as having a moral aversion to funeral pomp, and he wished his body to be converted to purposes useful to mankind. Sir Herbert Jenner Fust, in giving judgment, held that insanity was not proved; the fact merely amounted to eccentricity, and on this ground he pronounced in favor of the will. It was proved

that the testator had conducted his affairs with great shrewdness and ability ; that he not only did not labor under imbecility of mind, but that he was treated as a person of indisputable capacity by those with whom he had to deal."

Dr. Winslow maintains that there is a good deal of crime committed by persons who are "medically," if not legally insane ; and insists that the amount of punishment should be awarded with some reference to the physical condition, training, and temptations of the convict, and to the question whether he has not sprung from intemperate, insane, idiotic, or criminal parents.

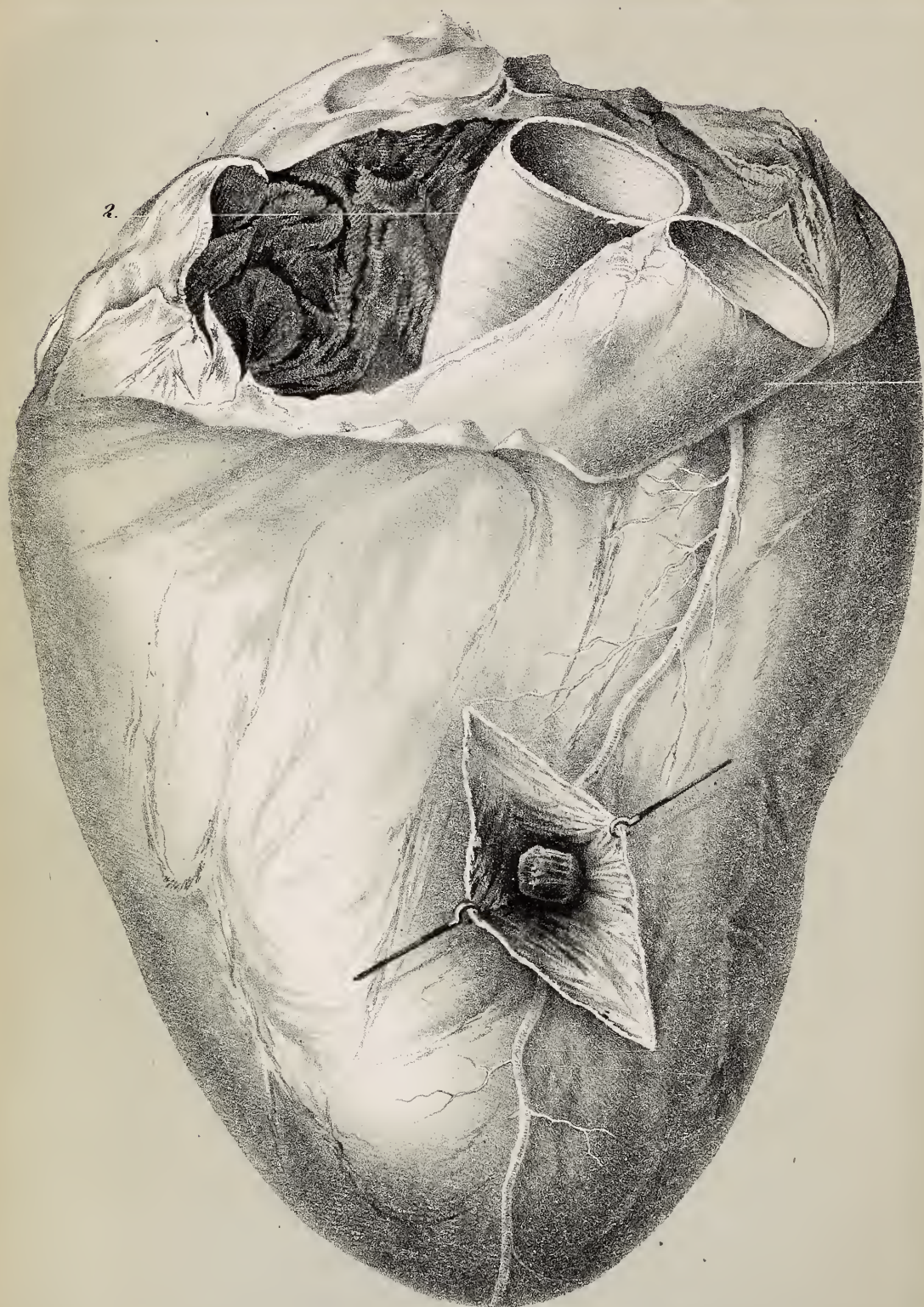
The Water-Cure humbug is not quite dead yet in England. Dr. JAMES WILSON, one of the earliest who was shrewd enough to advertise himself by forsaking honorable practice for the water-cure, is out again with "The Principles and Practice of the Water-Cure." Medical historians will do well to order some well-digested exposition of the "system" before they go out of print. What would we not give now for a genuine cotemporaneous history of the medical delusions that flourished in the times, say of William the Conqueror?

Mr. C. Holthouse, F.R.S., has issued, by the house of Churchill, six lectures on the Pathology of Strabismus and its treatment by operation, of which critics speak well.

Dr. SEMPLE of the Parochial Infirmary, Islington, has been dismissed from his post by the town authorities, because he laid before the Board of Health the filthy and over-crowded state of his wards. The English medical journals are indignant over the matter. Medical office-holders in this meridian should take warning, and not see too much.

At the late anniversary of the San Francisco Medical Society, Dr. CORR, the president, pronounced a glowing eulogy on the character and talents of the late VALENTINE MOTT, Jr., who was one of the Society's vice-president's. Dr. TOLAND was appointed to prepare a memoir of the deceased. The Society elected the following officers for the ensuing year : Dr. TOLAND, president ; Drs. Gerry and Donver, vice-presidents ; Dr. Bertody, corresponding secretary ; Dr. Smiley, recording secretary ; Dr. Holman, treasurer ; Dr. AYERS, curator ; censors—Drs. McIntosh, S. R. Harris, Hewett, Behr, Rowell. From the new president's address, it is evident that quackery occupies about the same position there as here to the straightforward, scientific practice of medicine.

DR. CARNOCHAN'S CASE OF GUN-SHOT WOUND OF THE HEART.



Engraved by J. H. P. 379 Broadway N.Y.

The plate is from a drawing of Poole's heart, the exact size. A layer of fibrin is seen on the surface.

An incision through the Muscular fibres and across the Coronary artery discloses the bullet. The bullet is seen lodged in the septum Medium behind the anterior Coronary artery.

1. the pulmonary artery.

2. the Aorta.

THE AMERICAN MEDICAL MONTHLY.

APRIL, 1855.

PART I.—ESSAYS, MONOGRAPHS, AND CASES.

Professor Barker's Clinique for Diseases of Women. March 13th.
Reported by JOHN O. BRONSON, M. D.

Case I. Maria Burchard. æt. 45, married, and is the mother of one child. She first applied at this Clinique August 1st, 1854. I will give you briefly, from the record, the history of this case. She has always suffered from severe dysmenorrhœa, and since her residence in this country, two years, menstruation has been very irregular. At the time of her application she had not menstruated for six weeks. She complained of pain over the sacrum, inguinal regions and down the legs. Defecation is always followed by severe pain, with a fainting sensation. Upon examination with the sound, the uterus was found retroverted and enlarged, measuring five and a half inches. Pressure over the vaginal cul de sac caused pain similar to that following defecation, and the surface of the posterior wall was uneven. The elevations on this surface were exceedingly sensitive to pressure. The cervix was much enlarged and the os patulous. The speculum revealed extensive ulceration, more particularly of the anterior lip. We had then, in this case, inflammation and ulceration of the cervix, chronic metritis of the posterior wall, and retroversion. The uterus was replaced and the nitrate of silver was freely applied to the cervix.

Menstruation came on the 8th, and was attended with less pain than usual. The nitrate of silver was freely applied every week, and the uterus was replaced by the sound whenever it was found retroverted. She menstruated again on the 9th of September, and suffered but little pain. On the 19th of September the ulceration appeared nearly well. The uterus was found to measure by the sound but three and a half inches. The cervix, however, still remained very much enlarged. The pain after defecation had entirely disappeared. October 10th. The mucous follicles imbedded in the mucous membrane of the os were found inflamed, presenting that peculiar form which the French term "inflammation frambeisée." Two of the follicles suppurated, as those of you who have attended the past winter will remember, leaving a small cavity in the mucous membrane. When several of the follicles suppurate, the os presents a peculiar honey-combed appearance. Finding the nitrate of silver inefficient, I made use of the acid nitrate of mercury. This has been applied five times, passing it up into the canal of the cervix. Her bowels have been kept open by the use of the pil. rhei. co. Her former symptoms have entirely disappeared. Menstruation has become regular and is unattended with pain. To-day she says that she is now perfectly well, except that she has "a faint hungry feeling at the stomach." You see through the speculum that the cervix has become nearly healthy in appearance, there being only slight circumscribed redness of the posterior lip. She was requested to come to the clinique four weeks hence, in order that we may ascertain whether the cure is complete. The professor said as the case had already been fully discussed before the class, he would not now detain them with any remarks upon it. He would now merely recall to mind the relation of retroversion to chronic inflammation of the posterior wall of the uterus, this inflammation being consecutive to that of the cervix. Chronic metritis resulting from parturition or abortion is a very different disease in its symptoms, progress, and treatment, from partial chronic metritis consecutive to inflammatory disease of the cervix.

Case II. Lucy Goadby, aged 22. This patient first came to this clinique March 14th, 1854. The following history of

her case is condensed from our clinical record. She was married four years since, and is the mother of one child, which was three years old last December. Previous to her marriage she had always been strong, and enjoyed excellent health. Menstruation had always been regular, although attended with considerable pain.

Since marriage she has not been so well, having more or less pain in the back, and constant leucorrhœa. During pregnancy she suffered much from sickness, but she had a good "getting up" after confinement. In the summer of 1853, she aborted at the third month of pregnancy. Since that time she has had almost constant pain over the sacrum and in the hypogastric region. The bowels have been constipated, and defecation has been attended with severe pain. Micturition has also been difficult and accompanied with a burning pain. After her abortion, she was confined to her bed with what her physician called "inflammation of the bowels." She had a great deal of headache and pain in the back. She could not go up stairs without violent palpitation of the heart and greatly increased pain in the back. On vaginal examination, the cervix was found behind the symphysis pubis, the uterine tumor was low down in the pelvic cavity and less moveable than in the normal state. On introducing the sound into the pelvic cavity, its point was found within three-fourths of an inch of the umbilicus. The speculum exhibited the cervix very red, with considerable epithelial abrasion, and from the os protruded tenacious, adhesive mucus. Her treatment was nitrate of silver to the cervix, cupping over the lumbar region, pil. rhei. co. p. r. n., and one of the following pills night and morning :—

R Hydrarg. protiodid.,	grā. viij.
Ext. Conii,	3ss.

M. ft. pil. no. 20.

After being under treatment for seven weeks, her symptoms were very much improved, and she ceased to come to the Clinique. She returned three weeks since, and informs us that she has been out of the city since her last appearance here, but now she wishes to be perfectly cured. She now suffers most from leucorrhœa, dysmenorrhœa, and menorrhagia. You will remember that the speculum exhibited a large ulceration on the pos

terior lip, to which we have freely applied the nitrate of silver, and it now appears nearly normal. Her husband died some nine months since, a favorable circumstance as affecting the rapidity of her cure.

Case III. Mrs. ——— was treated at this Clinique for uterine disease two years ago, since which time we have not heard from her until within the past five weeks. She reports that she was perfectly cured. Nine weeks since she gave birth to a child. Four weeks after her confinement she again came here. You will remember her appearance at that time. Her countenance was haggard, depressed, and indicated great suffering. Her pulse was very quick and irritable, She complained of constant and severe pain in the left inguinal region, which was greatly aggravated by attempting to turn in bed or draw up the left leg. She had rigors several times a day, urgent thirst, and no appetite. On examination, per vaginam, pressure to the left of the uterus caused exquisite pain. This part was decidedly tumefied, and gave a sensation to the touch almost like fluctuation. Prof. B. remarked that there was imminent danger of suppuration. The patient was placed under the charge of Dr. Ellis, of the graduating class. She was directed to keep her bed, five grains of Dover's powder to be taken three times during the day, and at bedtime ten grains of Dover's powder with one of calomel. A blister was also applied over the left iliac region. By this course of treatment resolution was effected. She had inflammation of the cellular tissue connected with the left broad ligament, and suppuration would have been a very unfortunate result. This is the "pelvic abscess" of some writers, the "pelvic cellulitis" of Prof. Simpson. This is not a very rare affliction as a consequence of parturition.

Mr. Taylor, of London, collected and published the history of sixty cases. Of these, fifty-three terminated by suppuration, and only seven by resolution. When the purulent matter accumulates, it may burst and open through the cutaneous surface, or into the vagina, the intestines, or the bladder, or else internally into the peritoneal cavity. When the opening takes place through the cutaneous surface, it is usually in the inguinal region. I last week saw a case—the patient was a daughter of a highly respectable physician of this city—where the abscess

opened by the side of the rectum, to the right of the sacrum. The ordinary and the most fortunate termination is where the abscess points into the vagina. I have several times discovered fluctuation, and made an opening by a small trocar into the vagina, instead of waiting for the abscess to burst. Prof. Simpson has called attention to the fact, that in some cases the abscess opens into two different pelvic mucous canals. He relates a case of his own, and refers to three others reported severally by Mad. Lachapelle, Prof. Stoltz, and M. Jobert, where, as a result of injury during parturition, the abscess opened on one side into the cavity of bladder, and on the other, into the cavity of the cervix uteri, thus making a double perforation and a fistulous communication between two distinct cavities. Prof. Simpson also mentions a case where pelvic abscess produced a utero-intestinal fistula, another where it resulted in recto-vesical fistula. Where the abscess opens into the peritoneal cavity, fatal peritonitis usually terminates the case. Now although this case has not gone on to suppuration, and our patient has greatly improved in most respects, still she is not well. She suffers a good deal of the time from neuralgia, confined to the right half of the head. She does not gain her strength; she has pain in the back, a dragging sensation of weight in the pelvic region. Her appetite is poor, and she complains of nausea. There has been a continued vaginal discharge since her labor. This discharge has been evidently purulent since the lochia have disappeared. A purulent discharge, after parturition, always demands attention. Its source may be from the vagina, the cervix uteri, or from the cavity of the cervix. You perceive that the speculum shows pus coming from the cavity of the canal of the cervix. I have never seen this appearance except in those cases following parturition and abortion. The mucous membrane of the cervix has a highly injected and granular appearance; also, as I think, characteristic of the puerperal sequelæ. The nitrate of silver was freely applied to the cervix and into the canal. The patient was ordered for injections a weak solution of the chloride of zinc, gr. j. to ʒj. of water, and quinine and iron internally.

Case IV. Mrs. B., native of Ireland, aged 45, mother of four children, the youngest is now eleven years. She suffered

from no untoward symptoms during or after any of her labors. Five years previous to the date of her application for treatment, she had an attack of diarrhœa, which lasted for two months. One month after the diarrhœa began, the uterus commenced to prolapse, and in a short time the prolapsus became complete, the tumor coming entirely out of the vulva. This was her condition when she applied at this clinique; Nov. 21st, 1854. —Menstruation ceased four months before this. The patient was placed under the charge of Dr. Ross, to whose assiduous attention she is indebted for her cure. This was a case of complete prolapsus, not arising from any pathological condition of the uterus itself. The predisposing causes were a large pelvis, a capacious yielding vagina and relaxation of the uterine ligaments. The indications were, 1st, to retain the uterus in its normal position. 2d, to diminish the preternatural capacity of the vagina. 3d, to restore tone to the ligaments. All these indications were perfectly fulfilled by the use of the lint and tannin pessary. By the middle of January, she came to the clinique, walking a mile without this support. The uterus was perfectly in place, but the anterior wall of the vagina, with the bladder, was considerably prolapsed. To-day she appears here to express her gratitude for the cure which has been effected. It is now some weeks since she has received any treatment, and the cure seems to be radical. The uterus is perfectly in place, although the inferior portion of the anterior wall of the vagina is still somewhat prolapsed. I believe, remarked Dr. B., that in all cases of complete idiopathic prolapsus, my experience will justify me in asserting, that by this method you can effect a radical cure, except in those cases where the sacrum is very straight, and there has been great loss of the substance of the perineum.

Case V. Mary C., aged 40, married, and mother of ten children, the youngest is now three years old. Her convalescence from confinement has always been rapid. She first came to this clinique Sept. 26, 1854. The prominent symptoms, as then recorded, were "lowness of spirits and depression of the heart" (these were her own words, often reiterated); constipation of the bowels, painful and difficult micturition, the urine being scanty and very high colored, and profuse leucorrhœa.

Menstruation rather abundant, but unattended with pain. She also complained of frequent sharp-shooting pains in the region of the uterus, which came on without provocation. The uterus was somewhat enlarged and firmly packed in the pelvis. It could not be moved in any direction by any pressure upon the cervix. The os is patulous, readily admitting the first phalanx; the cervix is very much enlarged, its diameter being at least two inches. Its surface was very irregular, almost of a stony induration, and entirely free from tenderness on pressure. I have seen a great many cases of ulcerated cancer of the cervix uteri, but never one before where I have felt warranted in confidently diagnosing schirrus of the cervix, previous to the ulcerative stage. I, however, believe this to be undoubted schirrus. The actual cautery was thoroughly applied to the cervix five times, viz., Oct. 3d, Oct. 24th, Nov. 14th, Dec. 21st, and Jan. 2d. You have had the opportunity of observing the decided benefit which she has derived from these applications, which would have been repeated more frequently if she had not neglected to come here. The leucorrhœa has disappeared; she no longer complains of those severe lancinating pains through the uterus, or of "lowness of spirits and depression of the heart." Next week, if she will come here, we will again apply the cautery.

Case VI. Mary Ann K., aged 41; has been married 23 years, but has never been pregnant. Menstruation has been very irregular and attended with very severe suffering, in fact, always confining her to bed for the time. She has menstruated but once since September last. This was in January, when the discharge lasted for three days. She complains of great pain after defecation, and sexual congress produces intolerable anguish. By vaginal examination, the body of the uterus is found to be a good deal enlarged and very low in the pelvic cavity. The right ovary is displaced, and can be distinctly felt in front of the right half of the uterus. The cervix is very small, not larger than my finger. The os tincæ can hardly be distinguished. On examining with the speculum, the atrophied cervix presented a healthy appearance, as regards color, but the os was very small. An ordinary probe was passed into the canal of the cervix, about three-fourths of an inch, but could be car-

ried no farther. There was complete occlusion of the cervix near the os interum. The following powders were prescribed :

R Sodæ bibor, ʒij.
Pulv. secale corn., ʒj.

M. Div. in chart, No. 12. One thrice a day.

We will see the effect of this treatment, as in one case, considerably resembling this, by these means the uterus was excited to contract and the occlusion was overcome. But it will probably be necessary in this case to perform an operation, which I shall be prepared to do next week.

Case VII. Mary Burns, aged 40, married, and mother of two children, the youngest being four years of age. Her husband died before her youngest child was born. She was three days in labor with her last child, and was then delivered by instruments. She got about in two weeks after her confinement, and remained well for a year. But for two years she has been suffering from pain in back and sides, and severe bearing down pains. Has not menstruated since her confinement, until last January, when she was unwell for a week, and suffered "seven times worse pain," to quote her own words, "than she ever did in labor." Since that time she has had, every two weeks, the symptoms and pains of menstruation, but without any discharge. These abortive efforts continue for two weeks, and then she has an interval of two weeks, in which she is free from these pains. On examination, there was found, so far as the finger could detect, complete atresia of the vagina about an inch from the vulva. The uterus, filling up the pelvic cavity, could be distinctly felt through the septum, but the cervix could not here be found. It was, however, perceptible on examining per rectum, resting on the recto-vaginal septum. The uterine tumor, formed by the accumulation of the retained menses, extended a hand's breadth above the symphysis pubis. At our next clinique, we will see what can be done for the relief of this poor woman, by means of an operation.

Dr. B. then exhibited a large fibrous polypus of the uterus which he had removed on the 3d inst. by excision. He gave the following history of the case. The patient was a lady from the country, married, and the mother of five children, the youngest of which is now about four years old. For nearly

two years she has had uterine hæmorrhage, sometimes accompanying menstruation, and at other times occurring in the intervals. The hæmorrhage had been controlled as much as possible by the use of astringents, styptics, and injections of matico, alum, &c. Her physician, a gentleman of great distinction and ability, was not permitted to make a vaginal examination until Feb. 25th, when, diagnosing the case, he was kind enough to recommend her to come to me to have the operation performed. The patient was very much anemiated from the long-continued drain upon her system, and presented the usual symptoms of such a condition, such as profuse leucorrhœa of a watery character, when there was no hæmorrhage, a hurried and difficult respiration, palpitation of the heart, deadly sallowness of the complexion, impaired digestion, and great mental anxiety and despondency. On examination, a tumor was perceptible, filling and dilating the cervix uteri. By the sound, this was ascertained to be attached to the fundus uteri by a large pedicle. You will, of course, understand that the safety of this patient could only be secured by a removal of this tumor. The only question was as to the mode of removal. I decided to excise, for the following reasons: 1st. The pedicle was very large. You observe that its diameter is one and three-fourths of an inch. To effect separation by sloughing produced by ligature, would require, in such a case, at least from fifteen to twenty days. During this time there would be in the uterus and vagina a semi-putrid mass, which would give rise to most offensive discharges, and then it was doubtful whether separation of so large a pedicle could even be effected by ligature. Several cases where the ligature has failed to produce this result, have been reported.

2d. It would require as long to perform the operation by ligature, as it would, if nothing untoward occurred, for the patient to convalesce after the operation by excision.

3d. I regarded the danger from the operation by excision to be very much less than from the operation by ligature. The danger from excision would be (a) hæmorrhage. This could be averted by ligating the pedicle, and, if found necessary, applying the actual cautery to the excised base of the pedicle. This was not found necessary—(b) the shock resulting from the

strong traction required to drag down the tumor and uterus, and the probable inversion of the uterus. Now it seemed to me that the protracted operation by ligature would prove a greater shock to the system, would result in more formidable exhaustion of nervous power, than that from the more severe but shorter operation by excision.

4th. I regarded the subsequent danger from irritation, absorption of pus, metritis or metro-peritonitis, &c., to be very much less if the tumor was removed by excision than if removed by ligature. The operation was performed March 3d, with the efficient aid of Dr. Conant. The tumor was seized by passing into the uterus first one blade and then the other of Luer's polypus forceps. It was then dragged out completely into the vagina. You see the tumor is larger than the ordinary foetal head at the full period of gestation. Chloroform was now administered by Prof. Doremus. I did not dare to bring her under its influence until severe pain was produced, as I feared from her anæmic and extremely feeble condition, that in producing anæsthesiæ we should overwhelm the nerves of organic life. The neck was now seized and brought down with a pair of long, curved Museux forceps. Then with another pair of straight Museux forceps the tumor was drawn without the external parts and excised. The uterus, which had been by the operation inverted, was at once repositied, the vagina was plugged with layers of cotton batting, and the patient was placed in bed. Twenty drops of Magendie's solution of morphia was given. The shock was very severe, the surface was cold, the respiration hurried and labored, and the pulse 180 per minute. It was three hours before she was convinced that the operation had been performed, and full six hours before complete reaction took place. Since that time convalescence has not been interrupted by a single unpleasant symptom. Her countenance looks better than it has for months, her friends say, and she is now able to sit up two or three hours during the day.

Selections from Favorite Prescriptions of Living American Practitioners. By HORACE GREEN, M. D.

Narcotics and Sedatives (continued).

Besides the preceding formulæ, in the combination of which the hydrocyanic acid is employed, we have several other preparations into which enters, either the cyanide of potassium, or the hydrocyanic acid, and which have been found to be of great value in practical medicine. These prescriptions will be given under the head of expectorants.

As palliatives in the treatment of all forms of neuralgia, the narcotics and sedatives are very generally resorted to by practitioners, especially during the paroxysms of the disease. When appropriately combined, their efficacy in these affections is more prompt and decided than when separately administered.

℞ Extracti Hyoscyami, 3ss.
Morphiæ Sulphatis, gra. iij.
Strychniæ, gra. ij.
Capsici pulv. 3ss.
Zinci Sulphatis, gra. xv.

M. Fiat massa; in pilulæ xxx. dividenda; capiat unam, ter quaterve in die.

In neuralgia, unattended by organic lesions, the above pills, exhibited every sixth or fourth hour, according to circumstances, will be found to be an excellent remedy. They have proved especially serviceable in that form of neuralgia in which the divisions of the fifth pair of nerves are so frequently involved. Not only in facial neuralgia, but in all cases where the disease has been caused by malaria, this combination may be administered with confidence that the result will be favorable. The valerianate of iron conjoined with the extract of hyoscyamus is an excellent antispasmodic and tonic, and may be employed with great advantage for the treatment of chorea and all the neuralgic affections of anæmic and debilitated females.

℞ Extracti Hyoscyami, 3ss.
Ferri Valerianatis, 3i.

Fiat massa, et in pilulas triginta dividendas; quraum date unam ter in die.

The valerianate of iron and the valerianate of zinc are two highly valuable remedies, and were the therapeutic powers of these medicines better understood by the profession, they would be much more extensively employed than they now are for the treatment of disease. The valerianate of zinc, Dr. Neligan says, is "one of the most valuable modern additions to the *Materia Medica*."

R Extracti Hyoscyami, ℥iiss.
Zinci Valerianatis, ℥j.

Fiant pilulæ xxx. Capiat unam bis terve in die.

The above pill is a valuable remedy in the treatment of facial neuralgia, and, indeed, is equally serviceable in all the nervous and neuralgic affections for which the valerianate of iron has been advised.

R Extracti Belladonnæ, grā. viij.
Camphori pulv., ℥j.
Quiniæ Disulphatis, ℥ij.

Misce ; Fiant pilulæ triginti.

These pills are very effective in the treatment of dysmenorrhœa. One pill may be exhibited every hour or two hours till the pain ceases. In females of a nervous temperament, when painful menstruation occurs, independent of organic lesions, these pills, administered as above directed, seldom fail of affording relief. In those cases of dysmenorrhœa where a tonic is not particularly indicated, the following are more appropriate, and are equally efficacious :—

R Extracti Belladonnæ, grā. viij.
Ipecacuanhæ pulv. grā. x.
Zinci Sulphatis, ℥ss.

Misce ; Fiant pilulæ xxx., quarum capiat unam quâque horâ, donec leniatur dolor.

The following pills are highly recommended by an intelligent and experienced practitioner in the treatment of leucorrhœa occurring in anemic and nervous females :—

R Extracti hyoscyami, ℥i.
Argenti Nitratis, grā. x.
Cantharidis pulv. grā. xii.
Quiniæ Disulphatis, ℥ij.

Fiant pilulæ xl. Sumat unam mane et nocte.

The same physician advises the subjoined formula as a combination that may be employed with great advantage as a diuretic and alterative in the treatment of cellular dropsy :—

R Extracti Conii, 3j.
 Cantharidis pulv., ʒij.
 Hydrarg. Submur., ʒss.
 Ipecacuanhæ pulv., ʒj.

Misce ; Fiat massa ; in pilulæ xl. dividenda. Cujus capiat unam ter quaterve iu die.

A combination of the extract of belladonna with quinine has been employed very efficaciously in the treatment of gastralgia.

R Extracti Belladonnæ, ʒss.
 Quiniæ Disulphatis, 3j.

M. Fiant pilulæ xxx. Sumat unam ter in die.

In that variety of gastralgia which is not unfrequently occurring in the course of chronic gastritis, we have derived the greatest benefit from the employment of the following pills :

R Extracti Hyoscyami, 3j.
 Argenti Nitratis, gra. x.
 Bismuthi Subnitratis, ʒiss.

Fiant pilulæ xl. : quarum sumatur una mane ac nocte.

The nitrate of silver combined with some one of the sedative extracts, may be employed advantageously in the treatment of almost all chronic gastric affections.* In cases of obstinate, chronic gastritis, or long continued dyspepsia, we have found

* With regard to the danger of "discoloration of the skin," from the internal administration of this remedy, it may be proper to remark that although we have used the nitrate of silver very freely, not only in topical applications to the mucous membrane of the air-passages, &c., but have administered it for many years internally in the treatment of diseases of the alimentary canal ; yet in no instance has such an event occurred in our practice. We have seldom continued its daily internal use for a period longer than six weeks, or two months, without intermitting the medicine for a time. In doses of from one-eighth to one-fourth of a grain, administered twice or thrice a day, the nitrate of silver may be given for two months without incurring the slightest risk of producing discoloration. Indeed, Sir James Johnson asserts, in his "Essay on the Morbid Sensibility of the Stomach and Bowels," that there is not an instance on record where the complexion has been affected by the medicine when restricted to three months' administration.

the following pills more efficacious than any other single remedy. They should be continued for several weeks :

℞ Extracti conii, *vel* Lupuli, ʒj.
 Argenti Nitratis, gra. x.
 Capsici pulv.
 Quiniæ Disulphatis, aa. ʒij.

Misce ; Fiat massa, in pilulas xl., dividenda. Capiat unam bis terve in die.

There is a troublesome and often an obstinate form of gastric irritability, denominated by the French *estomac glaireuse*, in which the patient occasionally ejects by eructation, a tasteless watery fluid, and which is accompanied, often, by a severe burning pain in the epigastric region. This variety of the disease is arrested with great certainty by the exhibition of either the preceding, or the following pills :

℞ Extracti Lupulinæ, ʒj.
 Argenti Nitratis, gra. x.
 Bismuthi Subnitratis, ʒiss.
 Quiniæ Disulphatis, ʒij.

Fiant pilulæ xl. ; ejus sumatur unam bis terve in die.

In all forms of chronic disease, attended with acute pain, as well as in all painful nervous affections, in the treatment of which, for any cause, full doses of opium are contra-indicated, the following combination may be administered with great advantage :

℞ Extracti Hyoscyami, gra. xv.
 Extracti Stramonii, gra. iv.
 Extracti Humuli, ʒj.
 Morphię Sulphatis, gra. iss.

Misce. Divide in pilulas xxx. ; quarum capiat unam omni semihorâ, donec leniatur dolor.

Of the therapeutic effects of muriate of ammonia, when internally administered, but little is known, as in this manner it is but rarely employed in this country. With the German physicians it has obtained a high reputation as a good alterative, and a promoter of healthy secretions in chronic diseases of the mucous and serous tissues. It not only promotes the mucous secretions, says Dr. Sunderlin, but the cutaneous exhalations, and improves also nutrition and assimilation. Combined with a sedative and narcotic, we have found it highly valuable,

in allaying irritation and in promoting expectoration, in the early stage of phthisis :

R Ammoniae Muriatis, 3ss.

Opii pulv., gra. x.

Digitalis pulv.

Scillae pulv., aa. ʒj.

Misce. Divide in pilulas triginti. Sumat unam quaque sexta horâ.

Sleeplessness, occurring in hypochondria, hysteria, and indeed in all nervous affections, may be overcome with great certainty by the administration of the following pills :

R Assafoetidae, 3j.

Morphiae Sulphatis, gra. iij.

M. Fiant pilulae triginti, quarum exhibe unam vel duâ horâ decubitus.

The above pills,—two to four exhibited daily,—are very efficacious in arresting the dry cough which is occasionally consequent on disordered menstruation in nervous females.

Valedictory Address delivered at the New York Medical College, March 1st, 1855. By HENRY G. COX, M. D., President of the Medical Board, and Lecturer on Obstetrics and Diseases of Children in the State Emigrants' Hospital.

Mr. President, Ladies, and Gentlemen :

Occasions like the present are looked forward to with the liveliest emotions of pleasure and hope, by those who are most intimately concerned in the exercises of the evening—the gentlemen on whom the doctorate has just been conferred. The goal has been won ; in anticipation of which event, many of them have passed sleepless nights, and burned the midnight lamp, in laborious and unceasing studies, to be enabled to receive the approbation of expectant friends, as well as of their teachers, who have expended long months and years, instilling into their minds the great truths of an ennobling profession. To them the Ides of March have come, the mysteries of the green-room have been solved, the dread ordeal before professors, trustees, and censors, has been passed, and in the consciousness of receiving the well-merited crown of their labors,

they feel that to-morrow they are prepared to commence the active duties of their profession ; but what to them seemed until to-day the full fruition of all their hopes, they will realize now that it has been attained, the actual struggle is only to begin, and in this the community, as well as themselves, have more than ordinary interest, for they may by virtue of the power delegated to them, be called upon to decide upon the life or death of some Pericles, who has been renowned among our statesmen, or some Aristides among our patriots, whose fame and praise have been re-echoed throughout this great Republic.

Every one values his health above treasures and gold, and feels how indispensable it is to his success in life that he be free from disease, and have within his reach the means of averting it, should it overtake him. Every one knows how light are all things in the balance compared with this, and how unspeakably more important to him is its possession than the accomplishment of any other result, however grand his imaginings or far-reaching his calculations. The enlightened and accomplished physician or surgeon has it in his power, as it were, by his talismanic words, and prompt action, to afford these means ; the results of properly employed educational advantages, close observation of the human frame, when in health, as well as when oppressed by disease ; by the knowledge derived from a close study of the great book of nature, ever open before him, and inviting its perusal. He turns to her botanic page, and extracts virtue from the beauteous rose, redolent with perfume, forces the deadly nightshade, the gaudy poppy, the drooping foxglove, to give forth from their leaves and petals the properties by which disease may be assuaged, or derives from the tendrils of the burrowing roots of some less pretending plants their sanative powers ; he descends into the mineral kingdom, and by the aid which the searching analyses of the chemist have afforded him, he causes this mighty kingdom to bring forth its varied contents, and makes them, too, subservient in ministering to the ills to which flesh is heir ; or he turns another page, and surveying the pure streamlet, from which he drinks when athirst, he applies by his acquired skill and experience this apparently simple but powerful agent to

allay the fevers which harass and exhaust the human frame. He brings also to his aid the electric fluid which man has been enabled to control for transmitting his ideas in a moment of time from one continent to another, which makes the ethereal vault brilliant and grand, by the coruscations of its lambent flashes, and is awfully sublime in its effects, when its terrific bursts, amid the quick rolling clouds give forth sounds like the roar of the vast artillery of armies in battle ; this terrific agent he not only renders innocuous, but avails himself of it to give new force to the impaired action of paralyzed nerves. And I may go on during the time allotted me to address you in descanting on the many sources whence the physician must derive his knowledge, and the *necessity* for its possession, in order, understandingly and successfully, to treat *one* of the innumerable phases of disease which he will be called to witness, and yet the half would not be told you. Should I say amiss, then, if I added that the great physicians who have been the luminaries of our scientific pathway must have been endowed with towering intellects, persevering industry, and indomitable self-control, connected with the sternest determination to extract *truth* only from all their studies, and from the whole range of material observation—and if all these were concentrated in the acquirements necessary for any other profession, whether it be that of the theologian, the statesman, or the orator, the highest honors would have crowned their labors.

As I proceed, it may not be out of place to allude to the more obvious acquirements, in extended detail, which the great physician, or surgeon, of the present day, must possess to enable him so to discharge the important duties which devolve upon him, as to secure the approbation of his conscience, and add honor to the profession he has chosen ; and to advert to some of the improvements which have been made, and the continuous progress of the various departments of medical science, from the time of the Father of medicine to the present day.

In the great science of anatomy, in all its varied aspects, as now studied and taught, entire proficiency is required, for there can be no rational medicine, no safe surgery, without it. Disease, which it is the object of these to prevent and cure, is

ascertained by a disordered function ; neither this nor healthy function can be understood without a knowledge of structure, nor can this again be comprehended unless minutely examined. This has been so thoroughly performed by the appliances of modern art, that not a fibre or corpuscle visible to the naked eye, now escapes the vigilance of the anatomist ; and when his unaided vision had reached its limits the microscope was invoked, and has revealed to him wonders of which he had not before conceived, and has unfolded the invisible organization of the structures, which go to make up the whole human microcosm. It has even gone further ; as has been happily said by an accurate observer, "it has surprised nature in the very act of primary production." Descriptive anatomy, reveals to the surgeon the organization and relation of different parts, with reference to surgical diseases and operations, and thus becomes to him the foundation of operative surgery. It also unfolds to the physician, the condition of different organs of the body, which are investigated with reference to diagnosis and the indication of every form of disease. Pathological anatomy displays the various changes of tissue resulting from disease. In its chemical aspects, are determined the elements of which the human frame is made up, and the changes which take place in the processes of each day of its existence ; and by comparative anatomy, we trace the progressive development from the lowest element of rudimentary formations, to the highest order of created forms.

With *materia medica* the physician must be intimately conversant ; he must know the peculiar properties pertaining to the same medicine, when procured from different quarters of the globe, and at various seasons ; the difference in effects upon different individuals produced by peculiar idiosyncrasy, and the changes resulting from combination, both in effects and power. He must examine new remedies which have been added to supply the place of others that have been abandoned as being useless and inert for purposes to which they were once applied.

With botany, including vegetable physiology, constantly ministering to the improvement of therapeutical resources, it is necessary that he be familiar.

The science of chemistry must also have disclosed to his understanding and vision the various combinations and changes of matter, which it furnishes for our *armamentarium medicum*, as well as the great service it has rendered in physiology, pathology, toxicology, and in the diagnosis of disease at the present day.

The too oft neglected study of medical jurisprudence, an ignorance of which has more than once, by its glaring display, brought disgrace upon our profession, when life and reputation, sometimes dearer than life itself, have been at stake, demands his highest consideration.

Physiology, which implies a knowledge of the functions of the human economy, and has been enriched by the splendid discoveries of the greatest minds, such as Bell, Müller, Marshall Hall, Bischoff, and others, and is constantly receiving additions from laborers in every country where scientific medicine is cultivated, must claim his special devotion; and though he may find much work remaining to be done, and some structures to be overthrown, yet will he look forward to the day when this shall be perfected, in connection with all the other branches enumerated; and a superstructure of scientific medicine will be raised, worthy a place beside the classic temples of the exact sciences.

He must possess a perfect knowledge of all that is comprehended in the foregoing, who would merit the name of an accomplished physician, and with such he will be qualified, to render daily, to his fellow men, more real and unquestionable good, than is communicable by any one class of beings to another.

How terrible, on the other hand, are the effects of the blunders of the ignorant physician—the mere empiric!—who gravely boasts that he knows and can cure every disease at first sight;—the ravages of the plague may be foreseen and averted, for it gives evidence of its purpose and power—but the empiric is silent and secret in his workings, and while looked to as a saviour, he gives speed only to the progress of disease, and certainty to the stroke of death; unskilled in the arcana of nature and of science, he deals destruction, where hope and confidence before reigned supreme; as, in his knowledge, his confiding victims blindly supposed, rested the power of restoring health to

their pestilence-stricken homes. Have not communities, then, an interest in, and a right for, their own self-preservation, to know that those in whose hands they place their lives, possess such knowledge as I have indicated?

To the class of the former, I know, gentlemen, that your opportunities have elevated you; and your Alma Mater sends you forth in full confidence, that of you, as of the great Grecian physician, Machaon, some modern Homer may sing, as did he of old:

A wise physician skilled, our wounds to heal,
Is more than armies to the public weal.

If now, however, that you have succeeded in investigating to your satisfaction, the phenomena of matter, and in having become profound anatomists, erudite physiologists, and elegant chemists, with a clear perception of the *modus operandi* of your *materia medica*, you feel that you have done all that is required, and have overlooked what has been termed "Moral Therapeutics," you will then have forgotten the ultimates of your high destination, and will deservedly be classed with such as have been thus described by a great German poet: "A physician, whose horizon is bounded by a historical knowledge of the human machine, and who can only distinguish terminologically, and locally, the coarser wheels of this piece of intellectual clock-work, may be perhaps idolized by the mob, but he will never raise the Hippocratic art above the narrow sphere of a mere bread-earning craft."

We have to deal, in the treatment of the sick, with the phenomena of life, and with those deviations from the normal condition which we understand as disease, and it becomes necessary to examine carefully for all the causes which produce this aberration.

The effects, which emotions of the mind possess in influencing certain organs and tissues, must be hourly studied in our professional avocations; *fear* will specially affect the heart's action, and if protracted, result in physical changes of that organ; *anger* will influence the hepatic secretion; *terror* has been known to arrest hæmorrhage; the dread of impending disgrace has checked convulsive disease; and *hope*, it is well known, even to those who hear me, who are unskilled in our science,

acts specifically in that disease of the respiratory organs, pulmonary consumption ; by buoying up the patient, even in the hours when almost visible to human eye, the dark messenger of death flaps his gloomy wings over the fair and loved sufferer, and beckons her to his embrace ; while the skilled physician feels he has no power to rescue his prey, hope still clings to the patient, and in the words of an eminent physician, " it has *lighted* up the countenance and made everything assume a bright and cheerful aspect ; new schemes of happiness have been contemplated ; everything has seemed brilliant for the future, while all beside see but the inevitable fate—the knowledge of which, the destroyer, by this emotion, has hidden from its deluded victim."

Often it happens that the much vaunted potency of some empirical nostrum has inspired confidence in persons suffering from nervous derangement, and has exerted such influence as to be supposed to have removed the malady. In acute attacks of disease, it has been observed that those who dread death least, or declare, as some have done, they will live in spite of the disease, and the doctor too, have a better chance for a favorable result, than the desponding ; and every physician who maintains always his self-possession, and enters the patient's chamber with a placid smile and an encouraging voice of hope, has had him say, when the crisis had passed, that hope in his physician's countenance was the sun-ray which warmed into life again his almost sinking soul. The poet Coleridge has truthfully said, " he is the best physician who is the most ingenious inspirer of hope."

There are to be found now, as in all periods of history, men who can see nothing good in medicine, and prophesy evil of it continually ; and even in the profession are to be found some whose hearts are troubled about the many *isms* and *myths*, after which, as after strange gods, the people have gone to do homage ; but these are only indications of the weak and nervous of our brethren, who fail to remember that for twenty-two centuries medicine has never ceased to be cultivated as a science, where civilization has made any great progress, and like all the sciences based upon observation, its development has been sure and progressive.

It has at times achieved great triumphs, and sustained severe reverses ; but this has been the fate also of chemistry, astronomy, and geology, and, like these, a glorious destiny and ultimate perfection await it.

To the enlightened eye, and the prophetic ken of the faithful votaries of our science there is no cause for fear on such points, for its laws, like those which govern the planets, and the natural development of all things, are perfect and based upon immutable principles, which must prevail, because their foundation is truth. All the opposition with which it meets, makes its beauty and simplicity but the more apparent. It is like the spot produced on the sun's disc, by some planet passing between it and the earth ; it may obscure for a moment somewhat, but has only the effect to make its radiance and effulgence more pure and beautiful by the contrast.

Let us glance briefly at some of the improvements in the study of medicine, and the diagnosis of diseases, since the days of Hippocrates. Although all the powers of his vast intellect were concentrated in observing disease, and all its symptoms, yet how great a link was wanting in making up a complete chain in his investigations. He and his disciples, no doubt, noted well the physiognomy of their patients, and all the external phenomena, but it was reserved for a later day, to the immortal Harvey, by his persevering and unremitting genius, to unfold and demonstrate his theory of the circulation of the blood. This was a mighty step in medical progress, not emitting a lurid glare to fade away again, like a meteoric flash, but steadfast as the sun itself, and illumining forever our course in pursuing further discoveries. And who is there will refuse to Jenner, gratitude for the boon which he has conferred on suffering humanity, by the discovery of vaccination, in arresting the ravages of that most loathsome disease, once the scourge alike of the palace of the potentate, and the cottage of the peasant, but *now* almost banished from civilized life ?

Has there not been progress, too, in the treatment of the unfortunate, bereft of his reason, who was formerly caged and chained like a wild beast. It is a bright era in the annals of our science, and among the proudest records of our profession, that in 1792 the benevolent and courageous Pinel struck the

manacles from the fettered limbs of the maniac, which had also helped to crush his afflicted mind : this was, as has been said, " a most emphatic recognition of the rights of humanity : " and the reform is still in progress, a result which has caused his name to be revered by science, and endeared forever to suffering humanity ; in contributing to these improvements the asylums of America take second rank to none.

Time would fail me, to advert to all that has been accomplished by the investigations of Morgagni, Haller, and Hunter, and later by the brilliant discoveries of Sir Charles Bell, Marshall Hall, Müller, and others, in the physiology and knowledge of the nervous system and its diseases.

What a flood of light has been poured upon the diagnosis of diseases of internal organs, since the introduction of percussion and auscultation by Laennec ; so that the accomplished physician can, with absolute certainty, in most cases, now declare the condition of the lungs, heart, and other internal structures, as if they were bared to his view ; and thus he is enabled to treat successfully those formidable, and so much dreaded diseases.

For the precise knowledge which we have at the present time of morbid action in different tissues, how much does the world owe to such laborers in our profession, as Louis, Andral, Chomel, Bright, and others. Among the improvements, not less vital to the progress of scientific medicine, which have been effected ; the breaking away from the authority of the fathers in medicine, where their conclusions have been found to conflict with the ascertained facts, of more accurately conducted investigations, should not be overlooked. We reverence, them for the great truths which they acquired and handed down ; but when we find error in their positions, we unhesitatingly reject them.

In surgery, where there is so much to address itself to the wondering gaze of the novice, by the brilliancy of its achievements, very much has been accomplished by the possession of positive knowledge, in its application to the relief of physical suffering.

Prior to the time of Galen, no knowledge existed of that one disease of the arteries called aneurism ; and if the number of cases now cured, every year, by operation is considered, how

many must formerly have fallen victims to it. Ambrose Paré first applied a ligature to the artery ; but to the philosophic mind of John Hunter, are we indebted for the present mode of applying the ligature in this disease, and this was practised for the first time in America, successfully, by a surgeon of New York. Since that period, the largest and most important arteries in the human body have been ligated for this disease ; the *arteria innominata*, the first time, and the left subclavian, within the *scaleni* muscles, the only time in the annals of surgery, by two surgeons of this city.

By a surgeon also of New York, not unknown to you, has recently the entire lower jaw been removed, and the patient's life preserved ; and instead of amputation of the arm, for disease extending the whole length of the ulna, (leaving the radius intact,) has that bone been excised, without the necessity of tying an artery, and the usefulness of the hand been saved. A ligature has also been applied to the femoral artery by him, for the cure of elephantiasis arabum, and the result of this original operation, has since caused its repetition with success by a distinguished surgeon of London, who nobly admits his indebtedness to the New York surgeon for the idea.

These are among the triumphs of surgery, begotten by a perfect acquaintance with anatomy and pathology.

I have heard it stated by a distinguished living surgeon, of this city, that, when a boy, he saw, within sixty miles of the spot where we now are, a lad bleed to death from a wound in the leg, produced by a scythe ; because there was no surgeon near, with skill enough to arrest the hæmorrhage.

The fate of one of the most accomplished of England's statesmen, and among the bravest of her chivalry, Sir Philip Sydney ; who was cut down in the prime of manhood, by a wound received from a musket ball a little above his knee, when extraction of the ball or amputation at worst would have preserved his valued life, the dread of hæmorrhage having prevented his surgeon from attempting any operation, is a sad commentary on the darkness of surgery in that day, when contrasted with the brilliant operations of the modern surgeon.

The day has gone by, when bistouries were plunged into aneurisms, mistaking them for abscesses. These are among the

blunders properly belonging to the times when the red-hot iron and boiling turpentine, were the only styptics known to the surgeon.

To an American surgeon of Boston, is due the honor of having been the first, to perform a surgical operation on a patient rendered insensible to suffering by ether. By the discovery of the use of anæsthetic agents, not only is death deprived of many a victim ; but the most formidable operations can be performed, being little more than matters of pastime, to the aspiring surgeon, ambitious of fame and honor.

Among those who have contributed to elevate surgery to its present position, may be mentioned the Coopers, Abernethy, Dupuytren, Brodie, Velpeau, Wright Post, Physic, Mott, Stevens, and J. Kearney Rodgers, to which, a host of other names may be added.

To the late Professor Beck, of this city, and his distinguished brother, are the legal and medical professions, indebted for the best treatise extant on medical jurisprudence.

To a physician of New York, belongs the merit of having been the first to apply topical medication, within the passages leading to the organs of respiration.

Since the teachings of Louis, the profession has learned, that fevers can be treated, not only without mercury and the lancet, but in the most simple manner ; and although typhus fever requires to be watched and cared for, with greater judgment than almost any other malady ; with the same skill and discretion that the pilot would steer his bark between the fabled Scylla and Charybdis, yet all the indications as they arise, can be fulfilled by the competent physician without the inordinate exhibition of drugs. How great has the value of that fluid become, which nature is so bountiful in producing—cold water ! In all febrile and inflammatory diseases it has been administered by the enlightened physician, for half a century—a simple, but withal a most potent remedy. Medicine has also developed in the minds of her votaries grand and culminating ideas, for the elevation and improvement of the race. The way to the present temperance reform, was paved in this country, by distinguished physicians of Washington, of this City, of Boston, and of Cincinnati. Institutions for the education of the deaf and

dumb were established in New York and Hartford about the same time, by two physicians ; and the effort to establish a school for the elevation, if possible, of the outcast idiot, and to infuse some ray of the light of reason into his undeveloped mind, (the result of which enterprise is most encouraging, as appears by a report of this institution, a few days since published,) is also due to a physician of this State.

The question is often asked, "if, through the benefits conferred on the world by medicine, human life has been prolonged?" To this a triumphant affirmative can be given. Macaulay, the historian of England, says, life has been lengthened in the whole kingdom. McCulloch (Statistics of the British Empire) found, that for ten years, from 1770, the mortality was 5 per cent.; from 1837 to 1841, it was reduced to 2.5 per cent.; in 1851, to 2.3 per cent. Advancing the strong proof, as corroborating, in a tangible manner, the effects of this decreasing mortality, that life insurance offices in that time, had twice reduced their premiums. From the registrar-general's report in England, it is shown, that the mortality is still steadily diminishing. In France, M. Dupin, in a paper submitted to the institute, on the vital statistics of that country, a few years since, shows the same result. And in the American army, with a corps of physicians second to none in any country, the mortality is only a little over 2 in 300 in a year.

While the student of geology is delving in the hidden arcana of primitive formations, and gazing in wrapt wonder upon the strata upheaved by Earth's convulsions, invoking them as to the ages through which they have passed, and thus reading, written with her own hand, the story of Nature's birth: the chemist is absorbed in his attractive study, and observation of the harmonious affinities, which his experiments reveal; the botanist culls from the humblest, and the most exquisite of the members of the floral kingdom, their family history and connections, while noting their ever varying beauties; and all the workers in the broad area of science, are contemplating their labors with joy unmixed: the physician unobtrusively, amid the dank airs of the dissecting room, the pestilential effluvia of hospitals, in exposing himself to disease and death, is alone,

snatching from these dangers, health, and prolonged life, for his fellow beings.

Besides what has been accomplished for medicine by the Physician, how much has been contributed to the other sciences by those intellects, the first germs of whose development, sprang forth, while exploring the truths, which these vast studies embrace. I will not dwell upon the discoveries made by such minds, but merely mention the names of a few of these bright lights—of Galileo, Galvani, Leibig, and Agassiz. Nor has the physician, when solving the workings of laws, pertaining to his art, been always so engrossed, as not at times to furnish from his rich resources, contributions to the field of literature. Who has not felt his soul expand, when perusing the poetic strains of John Mason Good? and who is there that has not for a time forgotten his hidden sorrow, in the enjoyment of the witty song and mirthful numbers of Holmes, the Hood of America? or who has failed to be touched with the pathos of the plaintive Moir, the gifted Delta of Blackwood? And this literary taste often pays graceful tribute to genius, wherever its impress is discovered. This is beautifully exemplified in an exquisitely written sketch of the life and character of Doctor Wells, author of the celebrated essay on *Dew*, by *one* who, in addition to *his* contributions to the science of medicine, has added another bay to the wreath, with which his *own brow* is encircled, by his classical and poetic essay on the life and times of Hippocrates. The sparkling imagination, and glowing pen of this writer* have graphically depicted, in the sketch alluded to, this ardent votary of science, who, when his physician told him a few months would probably terminate his mortal career,—instead of lying quietly down to meet his fate, like a true soldier, buckled on the harness, and applied himself more diligently than ever, with his shattered health, to accomplish the dearest object of his life,—thus the writer quoted speaks of his devotion and the value of his contribution to science: “with only the silent stars and the blue sky above him, did this philosopher meekly and reverently enter the great temple of nature, an earnest seeker of her secrets, an humble worshipper at her

* Prof. Elisha Bartlett.

shrine, and the true offering which he laid upon her altar, was blessed and accepted. The vail which had hidden one of her most beautiful mysteries was withdrawn; a new, and one of the fairest pages in her great volume was opened at his invocation, to the wonder and admiration of the world.

“A generation has since passed away—science, with her manifold faculties—restless, unappeasable, longing for absolute and boundless dominion—her forehead flushed in her daily triumphs, and radiant with undying Youth,—has extended in every direction the area of her empire, crowning and adorning it with her trophies;—art and industry have changed, not only the whole face of nature, but the most intimate and vital relations of life and society, the intercourse of man with man, and the interchange and transmission of thought; but this handiwork of Dr. Wells still stands as he left it,—not like the colossal calculus of Newton, holding in its stupendous embrace, alike the light dust on the balance, and the infinite universe of worlds; but, nevertheless, finished, faultless and entire,—compact and perfect in itself,—graceful and imperishable as one of the granite obelisks of the Nile, resting its basis on the solid earth, and lifting its apex high towards the heavens. Such is the clear and concurrent verdict of scientific men; and as long as the earth in her annual circuit around the sun, proclaims in the music of the spheres, the name of Galileo;—as long as the glory of Newton is set with the rainbow in the firmament;—as long as the fame of Harvey is spoken by every throb of the beating heart;—as long as the lightning flashes forth from horizon to horizon the great discoveries of Franklin; so long shall the hoar frost and the dew, as through winter and summer, in each still and starry night, they gather and sparkle, over all the broad surface of the earth, upon hedge rows and fences, upon mountain and valley, upon field, and forest, and meadow, upon cottage roof and temple dome, keep green and unfading the name and memory of William Charles Wells.”

I trust it will not be deemed out of place to advert, on this occasion, to the opportunities offered for the perfect study of medicine, in all its branches, in this city, by the vast amount of material furnished by the various public institutions for that purpose.

The time was, in England, that the most diligent students, who were afterwards her greatest men in the profession, found it necessary to go to the Continent, to finish their medical education;—Rome, Padua, Leyden, and Italy received her Harvey, her Brown, her Mead, and others;—as many of our young men now-a-days, leave this country, for Paris and Vienna. In England, this has long ago ceased, for her hospitals and schools are in connection; and the best hospital physicians, are among the teachers most sought after in the schools; the two are synonymous, and the precepts inculcated in the schools, have found exemplification by the bed-side of the patient—for it is by hospital practice and teachings, that these become public ministrations. Then the case of the humblest laborer comes under the view and scrutiny of the whole profession; and thus, he receives the highest protection.

How few are there, among the hundreds of graduates here who enjoy the opportunities of real hospital training, and how necessary, nay indispensable, is such knowledge? I will not now dwell upon the effects, the absence of this, produces, but merely add, that those who enter upon practice, without familiarity with the ordinary aspects of disease; the tact, the judgment and therapeutical skill, required to form a correct diagnosis, and corresponding treatment; however well they may be versed, in the most graphic descriptions of disease, will fail to recognise the original, when for the first time they behold it; and this clinical education, neither genius nor brilliant acquirements will supply. Science and practice must go hand in hand, nor should the idea of being practical, without a foundation, based upon scientific knowledge, be for one moment countenanced—it is merely brazen empiricism. The day has arrived, when the learned step, the contracted brow, and wise shake of the head, must be consigned to the same tomb, as the golden-headed staff and the Caducens with its serpent wreath.

Our hospitals, dispensaries, and infirmaries, already furnish the means for the proper clinical instruction of every student who comes to the city: 150,000 patients annually being now treated in them, and new ones are rising into existence every year. The stranger, who, a few years ago, saw on the islands on the east side of the city, only a few incon-

siderable buildings, now beholds beautiful hospitals, the results of the *energy*, *enterprise* and *benevolence* of New York, in which disease of every kind can be observed. On this island, we see their continued increase, and special hospitals also begin to arise ; that, now contemplated for the benefit of the suffering of the female sex, proposed by an eminent physician, will doubtless soon exist. Another institution for infants and children, originated by the single effort of a noble-minded and benevolent lady, who has enlisted other ladies in the enterprise, is already in operation, to a limited extent, and will soon occupy a place among the foremost of the hospital charities of this city ; for the work is blessed of Heaven, and in such hands it cannot fail of success. And when these, with another, already in course of erection, shall have been completed, 200,000 patients at least, will fill our public Institutions. In these hospital charities, no centralizing or narrow influences should ever exert control, for then they fail to secure the confidence of the public, and their utility becomes impaired. Hospitals, like the colleges themselves, should maintain with each other, only an honorable rivalry, as to which can best fulfil the high behests of our science, and send forth men, who shall be the most thoroughly qualified, to be benefactors of their race.

More voluntary contributions can be afforded in furtherance of these humanizing objects ; and why may there not be a grand "Free Hospital" here, to which all who may be in want of medical aid, however stricken, shall come, no matter what their country or their creed, no recommendation shall be needful, but that they are "sick :"—this may be said to be impossible, but it has succeeded in other and equally large cities, and why should it not here ? Some years ago, a poor outcast woman, ill and in distress, sat alone, unfriended, on the steps of a church in London ; there was no place to which she had a right to go ; the blue arch of heaven was her only canopy, and there unaided and unblessed, she breathed her last. She was seen by a gentleman (in whose bosom Christian charity dwelt) and this philanthropist, in obedience to his Master's injunction, to "do unto others as ye would they should do unto you," felt that there should be a place of refuge for such as she, headed a subscription list, which soon was ample enough to build and put in

operation the "Free Hospital" of London ; an enduring monument to the charity of a few individuals, who will, in the hour of their own dissolution, in taking a retrospect of their lives, feel that this much of good they have done in their generation ; on whose ears the welcome plaudit, "inasmuch as ye have done it unto one of the least of these, ye have done it unto me," will, in that parting hour, fall in musical tones.

Not alone is New York great, in the possession of the palatial residences of her merchant princes, her public works, and the mighty argosies, which each day pour into her lap, the rich produce of the golden streams of California ; the finest fabrics of the oldest capitals of Europe ; and bring contributions to her commerce from every civilized spot on the globe ; so that it can with propriety be said, on her ships "the sun never sets ;" but, she has greater wealth than all these : the institutions for acquiring medical knowledge in her midst, are sufficient for all the requirements of this vast Republic, whose territory extends from the roaring waters of the stormy Atlantic to the gentle undulations of the azure waves of the placid Pacific. And as she now stands proudly forward as the great commercial Emporium of the country, so may she, in future time, be the Metropolis of the great schools of American medicine ; and this destiny must be hers, if you, gentlemen, who have just entered, and those already engaged in the profession, are true to science and to each other.

Gentlemen of the Graduating Class, you see, by the imperfect sketch which I have drawn, that medicine is the noblest of all arts, that it is living and progressive. You see also, by the bright galaxy of names which I have placed before you, with what has been achieved by them, into how glorious a heritage you have entered, and to what a noble family you are allied, and although you are about to take an affectionate farewell of your alma mater, as you to-night, leave her classic halls, she will still watch your career with parental solicitude ; and should any of you be tempted to sell your inheritance for "a mess of pottage," she may not curse your memory, yet will she weep over your apostacy, and bitter tears will perhaps blot your names, from the fair records of her family. If, in the future, you should not add any new fact to our science, by some brilliant

discovery, yet will you, I know, have the consciousness of having restored, by your skill, the rose to some fair cheek on which the pale hand of disease had placed its impress, or you will bring joy to some almost desolate home, where the cherub of heavenly love had seemed to have been stricken by an arrow from the quiver of un pitying death ; such triumphs must again and again be yours ; should you, however, secure a niche in the temple of fame, and enroll yours among the “ deathless names that were not born to die,” fail not to keep in remembrance the example of the immortal Newton, characteristic of true greatness, conjoined with real modesty ; who, after all he had accomplished for science and the world, exclaimed “ he was like a child playing on the sea shore while the immense ocean of truth, lay unexplored before him.” When the evening of life shall approach to you all, and the lengthening shadows indicate that night is closing around you, to each, I would say, in the words of one of the most gifted poets of our country :

“ that when the summons comes to join
The innumerable caravan, that moves
To that mysterious realm ; where each shall take
His chamber in the silent halls of death,
Thou go, not like a quarry slave at night
Scourged to his dungeon ; but sustained and soothed
By an unfaltering trust, approach the grave,
Like one who wraps the drapery of his couch
About him, and lies down to pleasant dreams !”

Case of penetrating gun-shot wound of the heart—life protracted for eleven days—bullet found buried and encysted in the substance of the heart. [With a plate.] By J. M. CARNOCHAN, M. D., Surgeon-in-chief to the State Hospital, Professor of Surgery in the New York Medical College, &c.

On the 27th of February, 1855, I was called in consultation to see William Poole, a young man aged 33 years, of unusually athletic form and muscular development, who had been wounded two days previously in an affray with fire-arms. He had received a bullet wound in the outer aspect of the right thigh, two inches above the upper border of the patella. The wound,

however, which created alarm among his friends, was situated upon the anterior wall of the thorax, about three-quarters of an inch to the left of the mesial line, and about half an inch below a line drawn across the chest, from one nipple to the other. A bullet probe could be passed slantingly from right to left, along the track of the wound, for about an inch. At this depth, the probe was arrested, and it was not thought expedient to use force in making farther exploration. Poole received his wounds during a deliberate onslaught made on him by some five or six persons, armed with Colt's revolvers. The first ball took effect on the right thigh, and brought him to the ground. While thus prostrate, another assailant placed the muzzle of a pistol close to his chest, and discharged its contents. He immediately jumped up, and reeling towards a door, rested, as if stunned, against it for support, during some minutes. He then fell, exclaiming that he was dying, and remained senseless, cold, almost pulseless, and apparently moribund, for about four hours. From this condition he rallied, and became so free from the usual symptoms of severe injury, that his medical adviser, Dr. Putnam, considered that the ball had really not penetrated into the thoracic cavity, and my opinion was sought to corroborate or dispel this favorable view of the case.

I found him sitting up in bed, his back resting on pillows as a support, apparently at ease, and conversing with numerous acquaintances, who had come to visit him. His countenance exhibited no expression of anxiety, and he answered placidly and without effort the questions I put to him. His pulse was 80 in the minute, the respiration easy, the surface of the body normal in temperature and moist. The stethoscope revealed the existence of no difficulty in the respiratory passages, and the normal *Tick Tac* of the heart beat with healthy precision. There were no signs of inflammation or of effusion into the pericardium.

With such freedom from morbid symptoms, I was disposed to concur with his medical adviser in auguring favorably of the case; for although it might be inferred from the external character of the wound, that the ball had passed somewhere into the cavity of the chest, it was not impossible that it had become lodged in some position, where it remained innocuous.

The previous treatment had been gently antiphlogistic ; mild aperients, diaphoretics, acidulated drinks and low diet. The consultation resulted in a continuation of a similar mode of treatment, with the injunction, that he should be kept in a state of absolute bodily rest, and free from every cause of mental excitement, as I felt far from certain that he had not sustained mortal injury.

The symptoms in Poole's case illustrate in a remarkable degree some of the peculiarities of wounds of the heart, and also the assertion made by Hervey, that the heart is not very sensible. I am informed by Dr. Putnam, who saw him at one o'clock on the morning of the 25th, about fifteen minutes after the wound was received, that the patient was at first nearly pulseless, was insensible, and that respiration was performed with great difficulty. In this condition, laboring also under the ordinary signs of shock to the system from a gun-shot wound, he continued for about four hours, before any signs of reaction were manifested. Vomiting now occurred ; this was followed by increased action of the heart, and sensibility gradually returned.

During the same day (25th) he continued improving, and on the evening visit, the pulse beat 84. The skin was moist and natural, tongue healthy, with no unfavorable symptoms otherwise. No external hæmorrhage had occurred from the wound, nor had any evidences of internal hæmorrhage been evinced by vomiting or expectoration.

Monday, 26th. The wound was examined more particularly, and no traces of the bullet could be found, or any special indications manifested of its presence in the cavity of the thorax. Symptoms about the same.

Tuesday, 27th. I saw the patient for the first time, and found him in the favorable condition already stated.

Wednesday, 28th. Complained of slight headache, pulse 86, bowels not having been moved, a gentle aperient was ordered, by which the pain in the head was relieved. At times the patient had complained of transient and slight pain about the region of the heart.

Thursday, March 1st. Was called in to see patient a second time. Had slept well ; pulse 80 ; respiration natural ; ap-

petite good ; skin moist ; action of the heart natural. He stated that he felt no pain or unpleasant symptom except weakness, remarking, however, that he felt well enough to go out.

Friday, March 2d. The patient perfectly comfortable ; pulse 82.

Saturday, March 3d. Patient so well that, upon visiting him, for the third time, by request, he was found receiving his friends, and, contrary to previous injunctions, conversing freely with them. Enjoined repose.

Sunday, March 4th. No untoward sign connected with either the functions of circulation or respiration. During the day, he received, against positive orders, the visits of more than a hundred people, with whom he conversed. His own statement was that he felt quite well.

Monday, March 5th. Dr. Putnam was sent for early in the morning. At eight o'clock, A. M., the patient was found in a high state of irritability ; pulse 120 ; skin hot and dry, and complains of pain generally ; respiration troubled and more frequent. An aperient was ordered, by which the symptoms were much alleviated.

Tuesday, 6th. Was again requested to see patient. Pulse 100 ; countenance anxious ; the adnata tinged yellow ; complained of debility, but said he had no pain about the heart ; signs of effusion.

Wednesday, 7th March. Passed a restless night, notwithstanding the administration of an anodyne ; pulse 120 ; countenance more anxious ; respiration much troubled ; inability to remain in the recumbent posture ; symptoms gradually becoming more grave.

At two o'clock, A. M., Thursday morning, his attending physician was sent for. The patient was now rapidly sinking ; pulse almost imperceptible, and with difficulty counted ; respiration short, frequent, and difficult ; extremities cold : countenance pallid and hippocratic. From this time he continued to sink, and expired, without a struggle, at five o'clock.

Autopsy seven hours after death.—The body was in a state of perfect preservation, and showed a powerful and well-developed organization.

The surface of the body presented three orifices of gun-shot wounds : two on the external side of the right thigh, a short distance above the patella, by which, apparently, a ball had made its entrance and exit, respectively ; and one on the anterior aspect of the chest, three-quarters of an inch to the left of the median line, and about half an inch below a line drawn across the chest, from one nipple to the other. The examination revealed that all the organs of the body were in a healthy condition.

The sternum and cartilages of the ribs having been partially elevated, a bullet probe could be passed without difficulty, slanting from right to left, through the wall of the thorax, at the place of junction of the cartilages of the fifth and sixth ribs with the margin of the sternum.

The sternum being completely elevated, the pericardium was seen to be much distended, and on its surface, in continuation with the external wound, was observed a rough spot, which proved to be an opening into the cavity of the pericardium, thinly closed by the exudation of plastic material.

The right and left cavities of the pleura were free from effusion, and the lung on each side was in a sound condition. The pericardium was found filled with serous fluid, tinged with blood, and was so distended that it encroached very much upon the lungs on both sides. Upon opening the sac of the pericardium, and removing the large quantity of serous fluid, the external surface of the heart and the serous lining of the pericardium were both found to be entirely covered with plastic exudation, presenting all over signs of high inflammatory action. A cursory examination of the heart in position did not disclose the presence of any foreign body. It was afterwards taken out, and upon a careful examination, a bullet one inch in circumference, was found enveloped in a delicate cyst, and imbedded, to the depth of a quarter of an inch, in the muscular tissue of the septum, between the right and left ventricles, about midway between the apex of the heart and the base of the ventricles. Its locality was only indicated by the sense of touch, for as the wound had entirely cicatrized, there was no outward visible sign of its presence. Obviously the, cause of death was inflammation of the pericardium and heart and its results.

This case is one to be added to the few already on authentic record showing that penetrating wounds of the heart are not always immediately mortal.

It has, moreover, peculiar features which will render it remarkable in the annals of surgical pathology.

Several cases are mentioned in which patients have survived one or more days the effects of penetrating and non-penetrating wounds of the heart, inflicted by cutting instruments, and also of non-penetrating wounds inflicted by *gun-shot*.

But the peculiarity of this case is, that although the wound was a penetrating gun-shot wound, leaving the ball deeply buried in the tissue of the heart, the patient survived for a period of time so long as to encourage the hope of recovery.

This position of the ball discriminates the case from that mentioned by the French surgeon, Latour, where the ball had not penetrated deeply into the heart, but rested on its surface, partially encroaching upon the muscular wall of the heart and enfolded partly by the pericardium.

The autopsy of this case also revealed, that the wound was not only closed and cicatrized, but that a cyst was in process of formation around the ball.

By this case, also, it is established, that hæmorrhage is not necessarily a consequence of a gun-shot wound of the heart; for the serum found in the pericardium was merely tinged with blood, and there was no coagulum. The absence of hæmorrhage may be accounted for by the conical shape of the ball, and by its direction, two circumstances which favored its passage between the muscular fibres of the superficial layer of the heart, without severing them, and caused it to rest slantingly behind the anterior coronary artery, without wounding it.

No. 2 Waverley Place, 20th March.

Water Dressing for Wounds. By O. C. GIBBS, M. D., Perry Lake county, Ohio.

Practitioners of medicine and surgery occasionally become wedded to a peculiarity in practice, and adhere to it rigidly,

without due comparative consideration. They sometimes adopt a therapeutic or operative procedure, because of its supposed beneficial results, without comparison with other therapeutic or operative procedures. Physicians, as other men, sometimes stride hobbies and ride them until they are both sore-backed and lame. I think it was Bishop Burkeley who claimed that *tar-water* was capable of curing all the ills that flesh is heir to, and there are many at the present day who suppose that water *alone* will accomplish what tar-water has failed to do. Physicians, I apprehend, should be cautious in adopting any speciality or exclusive practice, that forms the basis of any form of quackery. I would have no one reject a truth, having any influence upon the healing art ; but, rather, eagerly incorporate it into legitimate medicine ; but I would caution against unnecessarily clasping hands with illegitimates.

These remarks were suggested by reading the cases of Dr. Hubbard, in the January number of the MONTHLY, taken from the New Hampshire Journal of Medicine.

That cold water is a valuable agent in treating wounds, I would by no means wish to be understood as denying. I would, however, respectfully express my doubts in regard to the utility of the exclusive and universal application of water direct to the wounded parts. In many incised wounds, the inflammation is no greater than seems necessary to secure a speedy and healthy reunion of severed parts, and it is certainly only necessary to apply instrumentalities to abate inflammation when that inflammation surpasses a healthy reparative standard. Cold is a very valuable agent in abating inflammation when too excessive, but I question the propriety of bringing water in all cases directly in contact with wounded parts ; when employed, it should be used upon parts adjacent or over waterproof dressings. I would not be understood as being an advocate for the "burdensome and too often injurious appliances" condemned by Dr. Hubbard, nor for the salve and ointment medication, so much in vogue with illegitimates. In all incised wounds, where suppuration is not absolutely essential, the severed parts should be brought into as perfect coaptation as possible, and permanently held there by such appliances as the circumstances of the case may require ; lint and roller, over all

completes the dressing. In case heat, swelling, pain, or, in a word, inflammation, supersedes that which is usual in healthy reparative action, cold should be brought into requisition to subdue the same.

In this connection I will simply mention one case, where no application but dry lint was applied to the wound ; and, in results, it is perhaps equal to any mentioned by Dr. Hubbard where cold water was applied from the first.

A. B., aged 22 years, by a misstroke struck his foot with an axe, between the great and second toe, passing between the metatarsal bones, and stopping only when the axe struck the heel of the boot. The foot was completely cloven to the ankle. I saw the wound some four hours after the accident. The parts were thoroughly cleansed, brought in coaptation, and held by the superficial interrupted suture, throughout the top and bottom of the foot ; adhesive straps, lint, and the roller, completed the dressing. I ordered the limb to be kept elevated, and, should swelling and pain be considerable, to be kept bathed with equal parts of cold whiskey and water. No application of the cold affusion was to be made to the wounded part. On the afternoon of the second day, I removed the dressing, and the wound was united throughout its whole extent, excepting about half an inch upon the top of the foot, where a ligature from a cut artery was brought out. The subsequent dressings were trusted to his nurse, and the patient was discharged. In three weeks from the time of the accident, the patient was at his usual occupation, without even the aid of a cane.

The object of this short paper is to discountenance undue meddlesomeness in simple incised wounds. Very many wounds have healed kindly, in spite of injurious appliances, designed to be remedial ; and many such appliances have received unmerited praise, only because they were less injurious than some other means usually made use of. Such wounds only require a perfect and permanent coaptation of severed parts, their protection from irritative causes, and the judicious and timely reduction of any undue vascular excitement or inflammation.

PART II.—REVIEWS AND BIBLIOGRAPHY.

“Nullius addictus jurare in verba magistri.”

History and Observations on Asiatic Cholera in Brooklyn, N. Y., in 1854. By JOSEPH C. HUTCHISON, M. D., late physician to the Brooklyn Cholera Hospital, Member of the New York Pathological Society, etc. New York. Holman, Gray & Co. pp. 24. *From the Author.*

It is not very often that we are sorry a book or pamphlet is sent to us for notice ; but in this case we are sincerely so. We wished to say nothing of it, but we do not feel at liberty to keep silence. At one of the societies of our city we listened attentively to Dr. Hutchison's verbal account of his management of the Brooklyn Hospital, and though painfully impressed with his manner and matter, attributed much of its vagueness, indistinctness and error, to the rather trying circumstances in which one is placed in making such a statement, when unused to formal discussion.

When this article appeared in another city journal, from which it is now reprinted, we felt ourselves absolved from noticing it, because it would be supposed that we thus desired to assail our esteemed contemporary. But again placed before us, and so that silence may be construed into approval, we cannot farther refrain from expressing our opinion.

The first third of Dr. Hutchison's paper is occupied by a statistical account of the cholera epidemics in Brooklyn in the years 1832, '49, and '54, together with the points of origin and the commencement of the last of the three. This, though not so logically arranged as might be desirable, is still a creditable performance. The tables, with some of the facts, are of value, but do not allow of sufficient condensation for our purpose, and we shall add from this part only the population, number of deaths, and ratios of the one to the other for each of the three years.

Years.	Population.	Deaths.	Ratio.
1832,	17,000	274	1:62
1849,	90,000	650	1:138
1854,	150,000	678	1:221

It should be remembered that the registration in 1832 was not probably so accurate as in 1854, so that the true ratio is perhaps even more in favor of the latter year.

The author then passes to the consideration of the cholera in the Hospital under his charge in the year 1854. This institution was

opened on the 26th of June, and was closed on the 30th of September. In the whole time 170 persons were admitted, viz., in June 7; in July 83; in August 56; in September 24.

Of those admitted in the "first stage" of the disease, 18 in number, all recovered. Of 17 in "partial collapse," one died; of 100 in "complete collapse," 82 died; of 9 in the consecutive stage, 5 died; of 26 admitted with "other diseases," 9 died. That is, of the 170 patients 97 died and 73 were discharged. Or of the 144 *cholera* patients (omitting other diseases) 88 died and 56 were discharged. We have no other clue to the "other diseases" than the remark "that cases admitted with diarrhœa which might have terminated in cholera, if they had not been treated, are included under the head of other diseases; and those admitted in *articulo mortis*, amounting to a considerable number, are put under the head of complete collapse.

By the side of these statistics we place a remark, which is one reason of our commenting on Dr. H's paper. "In no hospital in this country or elsewhere, where these remedies (opiates and astringents) have been relied on, or any other, indeed, has there been so large a proportion of recoveries, considering the stage of the disease when treatment was commenced, as has been shown to have occurred here." p. 23. To this statement we shall again refer.

The symptoms and phenomena of the disease, as observed by Dr. H., are then stated; the contagiousness of cholera is discussed, as well as the question of premonitory diarrhœa. Then the post mortem appearances are given, the whole closing with the treatment. From the moment that the author begins to discuss the symptoms, till he closes his paper, we find a vagueness, looseness and inaccuracy, which not only unfit it for any purposes of statistical deduction, but with such high claims for success, render it actually injurious in its influence, so far as it may have any, upon the profession. Illustrations enough are at hand, but before referring to them we will quote a remark of Stille's, in his essay on medical truth: "Surely," says he, "if knowledge is valuable, it is only so in proportion to its accuracy; to deny this, would be to admit the absurdity, that nothing is worthy of being thoroughly known."

Under the title "symptoms and phenomena," Dr. H. speaks of the evacuations from the stomach as being a greenish fluid in "about one-fourth of the cases in which vomiting was noted." There were twenty-one cases of this character noted—fifteen being females, of whom three died, and six males, of whom two died. "It was *sometimes* acid, and at *other times* neutral, and in no case examined was the presence of

bile indicated by the usual tests." This is eminently indefinite, for we have not any positive assurance that the bile was really examined in a single case. The last clause would be as true then, as if fifty cases had been examined, but the inference from and value of the statement is very different in the two cases. So too we are told that "in the dejections not the slightest trace of albumen was indicated in any discharge examined." "An abundant precipitate of chloride of sodium was thrown down by nitrate of silver, which was re-dissolved by the addition of ammonia." We suppose it is intended to be said that nitrate of silver gave indication of an abundance of the chloride of sodium in the fluid, but it is not that salt that is precipitated when the two substances meet in solution.

"Contraction of the pupils was observed in a *large number* of cases." "Cramps were present, more or less, in a great majority of cases," are additional vague statements when accuracy might have been had. The last page of this portion is more exact; and though no fact of great importance is stated, still what is given is exact and accurate.

Of the contagiousness of cholera little is said, no fact in its favor having been observed. Six cases are given to show that there is not of necessity a premonitory diarrhoea preceding the attack of cholera. On this point the cases are minute enough to be of some value.

The post mortem appearances, however, present the most striking examples of the faults to which we have alluded. The whole number of autopsies was "*about* twenty, but only five that were complete were recorded—two of which died in collapse, and three from consecutive diseases." Three were males, and two were females. This is a series of observations hardly extensive enough to found any deductions upon, or sufficient to justify one in setting himself up as authority in these matters. Certainly we have witnessed many more careful and thorough examinations than five, without any idea of authority in the matter on this account.

The usual external appearances were noted. In the description of the lesions found in the head we have the following remarkable statement: "In one case, death from consecutive gastro-enterite; after four days' duration of severe symptoms, the arachnoid, where it passes over the sulci, was raised by air, which escaped when the membrane was punctured." We confess to not understanding this lesion.

"In two cases the lungs were collapsed." Is it intended to say they were healthy or not? for healthy lungs always collapse when the thorax is opened. "The liver in two cases was greatly enlarged,

its left lobe extending into the left hypochondrium." In two cases it was normal, in one pale. Can it be intended that this enlargement was the effect of cholera? If not, it should not have been inserted.

So too the marks of gastro-enteritis are given as the results of cholera.

But the most remarkable statement is concerning the female sexual organs :

"In five cases there was ulceration surrounding the os, with a bright red or dark and roughened appearance of the mucous membrane lining the cervix, body, and fundus uteri. Sometimes the lining membrane presented the appearance of having been macerated in water. In three cases, a tenacious, bloody mucus issued from the os, and also covered the internal surface of the uterus, from which it was with difficulty removed. In three cases, the canal of the cervix was marked by longitudinal fibres, the *arbor vitæ* being entirely obliterated. The *ovula Nabothi* were frequently found distended with a pearly fluid. The ovaries often contained watery cysts, and the Graafian vesicles were sometimes filled with blood. The vagina presented an ecchymosed appearance, and, in two cases, it was extensively ulcerated."

On the same principle, a tibia or other bone, which had been fractured and badly united, should be mentioned among the post mortem appearances of cholera, the one class of lesions relating to the disease as much as the other and no more.

In conclusion, the author says, "Such is a rapid survey of the leading facts connected with the *post mortem* examinations of cholera; few of them can be regarded as characteristic, or as necessary consequences of the disease." With the latter clause we fully agree.

But the important matter of the whole paper is the treatment, especially when we remember the remarkable assertion before quoted, that "in no hospital in this country or elsewhere" has so much success been obtained. Dr. H.'s course is thus described :—If vomiting or nausea was present, an emetic dose of common salt was repeated till "vigorous emesis was produced." Its operation usually relieved the vomiting, and when it did not, "all other remedies commonly used for the purpose were equally inefficient."

"When the vomiting proved obstinate, nothing but lumps of ice and teaspoonful doses of beef-tea were allowed, and frequently even these were withdrawn, and the patient permitted to remain unmolested by any kind of treatment, for twelve, fifteen, or twenty hours, with the most satisfactory results, even when there was great depression of the circulation, the skin cold and cyanosed, and the rice-water purging continuing. Indeed, whenever vomiting was a marked symp-

tom, a favorable termination was anticipated. After the operation of the emetic, one grain doses of calomel were given every hour, sprinkled on the back of the tongue and washed down with water; the discharges, especially when of the rice-water character, would gradually become less frequent, and bilious matter usually appear in them in twelve or fifteen hours. Small doses of calomel were used, because they answered the purpose without the disturbing effects which might arise from inordinate doses. Even the small doses of calomel were often followed by bilious diarrhœa, sometimes of a troublesome character, after the subsidence of the cholera discharges; and it undoubtedly would have been a much more frequent and obstinate symptom, if larger doses had been used."

"An epispastic was usually applied over the abdomen, and rest in the horizontal position was always enjoined." For severe cramps inhalations of chloric ether were used. The hot air bath was also employed. "During the course of the epidemic a great variety of remedies were prescribed. At first stimulants were freely given in collapsed cases, because they *seemed* to be indicated; but I soon became convinced that they were of no use if not positively detrimental."

In five desperate cases saline injections were tried, "but with only transitory benefit." Sulphuric acid was prescribed without any benefit. "Opiates and astringents were not used, because they had been fairly tested in the epidemic of 1849, with very unsatisfactory results, and were then abandoned with obvious benefit." It would be a satisfaction to know where and by whom they were thus summarily put down. "Instead of arresting the discharges, it was deemed best to *let them stop*."

"The most valuable experience derived from the observation of the recent epidemic is, that cholera patients should be disturbed by remedies as little as possible. And whenever, in any case, we are at a loss to know what treatment to adopt, or if we find the patient growing worse under the influence of remedies that we think best adapted to the case, the better plan is to rely on the *vis medicatrix naturæ*. This I have repeatedly done with much satisfaction; patients in the deepest collapse having reacted without any treatment—in one case without even ice, beef-tea, or external applications."

The next question is as to the success of this treatment which reaches its perfection when nothing is done. We have quoted a passage twice in which Dr. Hutchison claims a success unparalleled in this country or elsewhere, "considering the stage of the disease when treatment was commenced." We shall not go hunting for successful

results in remarkable epidemics, but simply compare the Brooklyn Hospital in this respect with the two hospitals occupied by cholera patients in this city last summer. So that locality, epidemic and every other circumstance may be as near equal as possible. It should at the same time be remembered that the numbers in these different hospitals during the season were respectively, in the Brooklyn Hospital, 170 ; in the Mott street Hospital, 329 ; and in the Franklin street, 606. The columns below give the number of admissions and the per centages of deaths of those received in the various stages indicated. It is to be regretted that there is not more uniformity in the divisions, that they might admit of more easy comparison.*

[Brooklyn Hospital.

			Admitted.	Per cent. deaths
First Stage,	.	.	18	0.00
Partial Collapse,	.	.	17	5.88
Complete "	.	.	100	82.00
Consecutive Stage,	.	.	9	55.55

Mott street Hospital.

			Admitted.	
Incipient Cholera,	.	.	155	3.87
" Collapse,	.	.	66	60.6
Perfect "	.	.	64	84.37

Franklin street Hospital.

			Admitted.	
First Stage,	.	.	136	4.41
Second Stage,	.	.	56	10.71
Partial Collapse,	.	.	167	59.88
Profound "	.	.	192	33.34
Consecutive Stage,	.	.	8	25.

Or to bring them more directly in comparison, uniting under one the first and second stages of the Franklin street Hospital, we may arrange the table of per centage of deaths thus :—

	Brooklyn.	Mott street.	Franklin st.
First Stage,	0.00	3.87	6.25
Partial Collapse,	5.88	60.6	59.88
Complete "	82.00	84.37	33.34
Consecutive Stage,	55.55		25.

* The per centages for the Franklin street Hospital are calculated from a statement made by Dr. Budd, one of the assistant physicians. It is a little curious that in the last daily report of that institution published in the newspapers, and taken from the bills posted in the hospital, the numbers should have been 565 admitted ; 265 dead ; 265 recovered ; and 27 remaining. One does not readily understand how, at the closing of the hospital, there should have been 606 patients received, and only 255 deaths. That is 41 more patients than up to the 25th of August, and *not so many* deaths by ten.

The per centages for the Mott street Hospital are calculated from Dr. Conant's final report, published in the MONTHLY.

There is obscurity in these tables from the uncertain and arbitrary lines which mark the boundaries of each division, and there is no way of bringing the three tables into exact parallelism. For this purpose we omit those noted as received in the *consecutive stage*, as none are so classified in the Mott street Hospital, and give the per centages of deaths among all others received, excepting of course the moribund. This will give the number of deaths from cholera of those received in the various stages of the disease, and will exclude those who subsequently died of other diseases, as delirium tremens, phthisis, &c.:—

Hospital.	Per centage of deaths
Brooklyn,	61.48
Franklin street,	37.54
Mott street,	35.09

These figures do not look very much as if Dr. Hutchison's success was so very great as to justify his self-congratulations. His first line of the table, no deaths from those admitted in the first stage, is beautiful, and we fear his mind has rested on that to the exclusion of the dark third line, *eighty-two* deaths in 100 patients. What else could be expected from such therapeutical doctrines? All sorts of things were tried except opiates and astringents, and finally Dr. H. settled down upon the belief that when the patient grows worse under treatment, "the better plan is to rely on the *vis medicatrix naturæ*." We have a great respect for this *vis*, but should in our own case respectfully decline placing our reliance upon it if we had the cholera. The per centage of deaths of the Brooklyn Cholera Hospital, as compared with those in New York, being nearly twice as great, would not encourage us to trust our patients to it, if we desired to preserve their lives or our own reputation.

In conclusion, we must protest against the insufficient observation, the crude pathology, the unscientific and unsuccessful therapeutics, and the baseless gratulation, which our author manifests, but which we are sure are the result of carelessness rather than of any intention to draw false deductions from the premises.

E. H. P.

On the Construction, Organization, and General Arrangements of Hospitals for the Insane. By THOMAS S. KIRKBRIDE, M. D. Philadelphia: Lindsay & Blackiston. pp. 80.

The author in this work gives his opinion as to what a hospital for the insane should be in its general arrangements and organization. His experience has been sufficient to make his opinions valuable, and his book is worthy of careful perusal by those who have charge of or are consulted concerning such enterprises.

E. H. P.

A Dictionary of Medical Terminology, Dental Surgery, and the Collateral Sciences. By CHAPIN A. HARRIS, M. D., D. D. S., Professor of the Principles of Dental Surgery in the Baltimore College, &c., &c. Second Edition. Philadelphia: Lindsay & Blackiston. 1855. pp. 800.

To make a good dictionary, whether of the language generally or of the technicalities of any department, is no easy task. It involves a large amount of labor, of which all who have not made some attempts in the same direction must be ignorant, and which by no means shows in the ultimate result. For this reason we always look upon a new dictionary with much interest, to see to what extent its author has succeeded in carrying out his intentions in the accomplishment of his undertaking. From the preface we learn that Dr. Harris first issued a dictionary of dental surgery and its technicalities, and that this second edition is the result of a condensation of the dental portion and the addition of the technicalities of general medicine. The special department of dentistry still stands prominent, but the other portions are well executed.

There is not the minute picking up of every word that ever finds its way into medical books that Dunglison's dictionary exhibits, and which is sometimes a great convenience, but the selections and definitions seem to be more useful. An advance, too, is made in adding the accentuation to the words, and we trust the time will come when to this we shall have added the sounds of the letters, so that there may be some standard of authority which shall tend to produce some approach to uniformity in our national medical pronunciation. The publishers have also done their part well; and we feel safe in recommending this work to those in want of such a dictionary. It will be a useful addition to a medical library.

E. H. P.

Positive Medical Agents; being a treatise on the new alkaloid, resinoid, and concentrated preparations of indigenous and foreign medical plants. By authority of the American Chemical Institute. C. B. Norton. New York, 1854. pp. 304.

Precisely what the American Chemical Institute is, or who compose it, we do not know, though this book is published by their authority. Neither are we informed who is the author of this work; but both of them are matters of comparatively little importance. We are under the impression, however, that B. Keith & Co. are the

Chemical Institute, and probably the book is written by them or to their order. Be this as it may, Keith & Co. manufacture what they term the active principles of plants, and this book is to give information concerning them.

The contents are divided into three parts. The first, consisting of five chapters, is a discussion sometimes pleasant, sometimes correct, sometimes absurd, of various topics connected more or less directly with medical subjects. The argument which this part appears to be intended to support is that many plants are useful as remedial agents—that their effects can be better gained by separating their active principles, and giving them in more convenient doses; and that the “American Chemical Institute” can accomplish this separation.

The second part is concerning these active principles or concentrated preparations individually and collectively. That our readers may know the names, together with their sources, and alleged properties, we give the following table, premising that the termination *in* is given to resinoids and *ine* to alkaloids:—

<i>Preparation.</i>	<i>Source.</i>	<i>Properties.</i>
Geranin,	Geranium maculatum,	Powerful astringent.
Hydrastin,	Hydrastis canadensis,	Laxative tonic.
Hydrastine,	“ “	Astringent tonic.
Apocynin,	Apocynum androsaemifolium,	Alterative tonic. Diuretic.
Gelsemin,	Gelsemium sempervirens,	Sedative narcotic.
Caulophyllin,	Caulophyllum thalictroides,	Parturafacient.
Capsicin,	Capsicum baccatum,	Stimulant.
Chelonin,	Chelonia glabra,	Anthelmintic tonic.
Asclepin,	Asclepias tuberosa,	Diaphoretic.
Cypripedin,	Cypripedium pubescens,	Stimulating narcotic.
Eupatorin,	Eupatorium purpureum,	Diuretic.
Rhusin,	Rhus glabrum,	Astringent tonic.
Myricin,	Myrica cerifera,	Stimulating “
Helonin,	Helonias dioica,	Anthelmintic, diuretic and tonic.
Podophyllin,	Podophyllum peltatum,	Cathartic.
Lobelin,	Lobelia inflata,	Emetic.
Sanguinarin,	Sanguinaria canadensis,	Emetic.
Leptandrin,	Leptandra virginica,	Laxative, alterative.
Enonymin,	Enonymus americanus,	Laxative, tonic.
Irisin,	Iris versicolor,	Cathartic.
Rumin,	Rumex crispus,	Tonic, alterative.
Alnuin,	Alnus serrulata,	Alterative.
Ol. Erigeron,	Erigeron canadense,	Diuretic, tonic and styptic.
Senecin,	Senecio gracilis,	Diuretic.
Phytolacin,	Phytolacca decandria,	Alterative.
Scutellarin,	Scutellaria laterifolia,	Narcotic.
Jalapin,	Ipomæa jalapa,	Cathartic.
Stillingin,	Stillingia sylvatica,	Alterative.
Xanthoxylin,	Xanthoxylum fraxineum,	Stimulating tonic.
Veratrin,	Veratrum viride,	Sedative.
Cornin,	Cornus florida,	Bitter tonic.
Viburin,	Viburnum opulus,	Aromatic tonic.
Hyosciamin,	Hyoscyamus niger,	Sedative narcotic.
Lupulin,	Humulus lupulus,	Hypnotic.
Prunin,	Prunus virginiana,	Tonic and sedative.

In this table we have followed the orthography even of the Institute, and believe that from it will be most speedily learned what is attempted to be accomplished.

The third part consists of "clinic reports," in which cases are reported as treated by these "positive agents," many of them in the way of experiment, sometimes rather rash in its character.

It will be apparent that the Institute is the polished descendant of old Thomsonianism, and is one school of botanists. Still, there may be something useful in its doctrines, and it is therefore worthy of investigation. It is a matter of doubt whether or not these preparations can be relied upon as constant, if they are found useful, and all these subjects demand investigation. The sneers at ordinary medical practice, and assertions of the slow progress, or even no progress, of medicine, lead us to look upon the book with some suspicion. Still we should sift out any kernels of wheat it may contain, and add them to the granaries of our science. But experience only can determine for us what may be relied upon as the real progress of these preparations of the Institute.

E. H. P.

The Analytical Class-Book of Botany, designed for Academies and Private Students. By FRANCIS H. GREEN and JOSEPH W. CONGDON. New York: D. Appleton & Co. 1855. Imp. 4to. pp. 223.

This is an excellent work, and well calculated to meet a want long felt for a simple elementary work, to be used in our schools, and for the use of those who desire to prosecute the study of botany by their own private study. It is divided into two parts. The first portion, written by Mr. Green, who has been for some time engaged in teaching botany, contains a description of the elementary structure and physiology of the plant. It is profusely illustrated by wood cut diagrams, apparently selected from the best sources, and which form excellent examples of matter described in the text. This department is clearly and concisely written, and up to the latest views of modern physiologists.

The second part contains systematic botany, arranged by Mr. Congdon. The classification adopted is that of the natural orders, and the descriptions of the several orders and genera are carefully prepared and written with as much avoidance of technicalities as is consistent with a faithful portraiture of the inudalpidiv lants. Espe-

cial reference is made to, and examples selected from, the Flora of the northern states, and of the State of New York particularly, so that the student may be assisted in the formation of his herbarium from the vegetation around him. One defect appears to us to exist in this department, which, if supplied, would have much increased the value of the work to the collector. We allude to the habitat of the plants. This is given in general terms, such as moist meadows, woods and thickets, &c., but the exact localities are not specified. The time of flowering is given; and other characteristics are given, which supply, but not as completely as would otherwise have been the case, a guide to the careful collector.

We recommend the book strongly to those who take a pleasure in the study, and we would hope there are few who do not. It is for study and recitation the same as maps in geography. They are, in fact, but a recapitulation of the text in another form; and thus, while they repeat the idea, they also give a pleasing variety to the lessons, and appealing from the eye to the mind, and the reverse, they awaken the most lively associations, tending to fix the impressions not only in the memory, but also in the heart.

We cordially recommend to all who take a pleasure in this delightful study, and we hope there are few indeed who do not do so.

The medical student will be much benefitted by a careful perusal of the book, should it do nothing more than incite him to a more intimate study of the department which is so essential to the useful practitioner and accomplished physician. †

PART IV.—CHRONICLE OF MEDICAL PROGRESS.

[Translations from the German, under this head, are made by Dr. H. N. Bennett.]

Surgical Society of Ireland, Jan. 13.—Dr. Benson, President of the College, in the Chair.

Dr. Bellingham said the morbid specimen upon the table was perhaps of sufficient interest to exhibit to the members of the Society. The case was one of dilatation of the ascending portion of the arch of the aorta, with disease of its lining membrane, in which death resulted from the formation of a fibrinous concretion in the right cavities of the heart, obstructing the tricuspid orifice and extending into the divisions of the pulmonary artery.

The patient, a corn-porter, aged about 40, was admitted into St. Vincent's Hospital, under his care, on the 1st of the present month. He is stout and muscular, accustomed to lift and carry heavy weights, and has drank hard. He stated that he had always enjoyed excellent health until August last, when he had a severe fall. He was standing upon the step of an outside car, and in the act of putting on an over-coat, when the horse moved on, and he fell heavily backwards ; he was stunned by the fall, and remained insensible for a few minutes. Since then he has never been well, or able to work as before ; palpitation commenced soon after the injury, with pain between his shoulders, which increased if he attempted to work. He also suffered from cough, particularly within the last month. A fortnight ago he began to suffer, in addition, from dyspnœa, and he expectorated some blood. Within the last week he has been unable to lie down in bed.

When seen by him on the following morning, the countenance was dusky ; he was unable to lie down ; there was no œdema of any part ; he complained principally of the dyspnœa and cough ; the impulse of the heart was rather less than natural ; no jugular pulsation ; pulse regular, but somewhat jarring, and visible in the carotids, but not in the brachial or radial arteries. Dullness on percussion over a large space in the præcordial region, and tenderness on percussion in the epigastrium.

On auscultation at the apex of the left lung, a fine crepitus was audible. Over the middle bone of the sternum, and to the left of this point, a short double rough murmur replaced both sounds of the heart ; neither of these sounds was prolonged or blowing. Lower down and nearer the apex of the heart, a sound between a friction and a creaking sound was audible.

A small bleeding from the arm to six or eight ounces was directed ; a mixture containing subcarbonate of ammonia, Hoffmann, and sulphuric ether in camphor mixture directed to be given at intervals.

The patient expressed himself as much relieved by the bleeding. Between eleven and twelve o'clock at night, he left his bed, it is supposed, for the purpose of lighting his pipe, and in the exertion to get back into it he fainted. This was followed by intense dyspnœa, coldness of the feet and hands ; a cold perspiration broke out upon the surface with tracheal râles ; he could breathe only sitting up with the head very much inclined forwards ; the pulse was imperceptible, and he appeared to be dying. Stimulants were freely administered, a mustard cataplasm applied to the region of the heart, and heat to

the lower extremities. He rallied slightly towards morning ; the pulse became perceptible, and though very small, it was regular. On auscultation, a soft muco-crepitating râle was audible over both lungs. He died about nine hours from the period of syncope, and rather suddenly, preserving his senses perfectly to the last.

The body was examined within twenty-four hours after death. Subject stout and muscular ; no œdema of any part. Strong and old pleuritic adhesions on the right side, about eight ounces of limpid serum in the left pleura. Apex of the left lung in the early stage of pneumonia. Pericardium very closely embracing the heart, so that at first sight it appeared to be adherent ; this was found to arise from the great distension of its cavities. A well-marked white patch on anterior surface of the right ventricle. Some patches of recent lymph upon the anterior surface of the left ventricle near its apex. Right auricle and left auricle and ventricle greatly distended with black blood, which was in great part fluid. Right ventricle containing a large fibrinous concretion, of a white color, which passed through the tricuspid orifice into the auricle, extending upwards into both divisions of the pulmonary artery, and almost completely closed the right auriculo-ventricular orifice. Heart much enlarged, weighing $20\frac{1}{2}$ ounces ; enlargement in the left ventricle particularly, its walls an inch in thickness near the base, and its cavity dilated. Right ventricle not dilated, its walls three lines in thickness.

Ascending portion of the arch of the aorta dilated, its interior everywhere rough and irregular from atheromatous and calcareous deposit. Aortic orifice measuring $3\frac{1}{2}$ inches in circumference. Semilunar valves thickened at their margins and opaque, permitting fluid poured into the aorta to regurgitate slowly into the ventricle. Liver enlarged, much congested, a section exhibiting the nutmeg appearance.

Dr. Bellingham said the immediate cause of death in this patient was clearly the fibrinous concretion which obstructed the tricuspid orifice and almost completely prevented the passage of the blood through this aperture. It had probably commenced to form a week before the patient's admission, when the report states that the dyspnoea became so severe as to prevent the patient assuming the recumbent posture. In addition, he labored under recent pneumonia and partial pericarditis ; and it is probable that the presence of these diseases favored the formation of the fibrinous concretion in the cavities of the heart.

The physical signs present in this case—viz., the double rough murmur over the sternum, the jarring pulse, and the visible pulsation

in the carotids—had their source in the diseased state of the ascending portion of the arch of the aorta. On a former occasion, Dr. Bellingham said he had called attention to this morbid condition, and pointed out how its signs differed from those of obstructive and regurgitant disease of the aortic valves. In the present case, although the semilunar valves are thickened at their margin and opaque, they were capable of performing their function almost perfectly, as water poured into the aorta made its way but slowly into the ventricle.

The symptoms which set in during the last hours of life pointed to the right side of the heart as the site of the impediment to the circulation. Thus although there was the most intense dyspnoea and orthopnoea, the pulse when perceptible was perfectly regular; while pain or angina was not experienced by the patient. If the same impediment to the circulation had existed to the left side of the heart, pain, having the characters of angina, would probably have been present in addition, and the pulse would have been intermittent or irregular.

Dr. H. Kennedy said the Society was indebted to Dr. Bellingham for this interesting case. It was now more than thirty years since the late Dr. Harty had directed special notice to the subject of fibrinous concretions in the cavities of the heart, and to the signs and effects produced by such a state. Of late, however, this subject had been brought forward by gentlemen in London, as if it were new, not being aware possibly of what had been done before. It was right to observe that in London it was stated as a fact that these concretions, or a portion, could be carried by the circulation to some point where obstruction occurred; and when this took place, as for instance in the brain, paralysis might be the result. Dr. Kennedy thought that this point required much stronger evidence before it could be received. As to the symptoms which occurred within the last hours of life in the case given, he must state he had seen such in other instances where no such concretions existed, but only a similar state of the aorta; besides, there was here, in addition, acute disease of the lung.

Dr. Murney said there was an appearance of inflammation about the aorta which might account in a great measure for the symptoms described by Dr. Bellingham.

Dr. Geoghegan was not prepared to say whether the presence of the fibrinous deposition was the cause of death in Dr. Bellingham's case; but in many instances which came within the range of his own observation, he found that the circulation was greatly enfeebled and disturbed before death, where such deposits existed to a large extent,

either in the right auricle and ventricle, or in both sides of the heart. A striking example of this enfeebled state of the circulation was met with in the collapsed stage of Asiatic cholera, for in many cases of that terrible disease, which terminated fatally, he had noticed the presence of these fibrinous deposits at both sides of the heart, and he therefore agreed with Dr. Kennedy that, although they did sometimes occur in disease of that organ, yet they ought not to be set down as being in all cases the cause of death.

The *President* remarked that although the fibrinous deposits might not have been the actual cause of death, yet they must have considerably hastened the catastrophe.

Dr. Kennedy said he understood Dr. Bellingham to state that there had been chronic inflammation about the heart, which was a very common thing in connection with the formation of morbid deposits in the region of the aorta. In such cases, when the inflammation had attacked the coats of the aorta, and morbid deposits had formed upon them, Dr. Corrigan recommended bringing the patient under the influence of mercury.

Dr. Byrne would be rather inclined to say that the cause of death in this case arose from poisoning of the blood. If there was a fibrinous deposit in the right ventricle, it was obvious that the blood could not be sent into the lungs in order to be properly aërated. That was the direct cause. Again, if the deposit was in the left side of the heart, the lungs must become gorged, the blood could not be aërated, and would act injuriously upon the brain.

Dr. Stapleton suggested that the loss of nervous power consequent upon the injury of the brain, might help to bring about the death of the patient, superadded to the disease under which he labored.

Dr. Beatty read the following case, forwarded by Dr. Wilkinson of Limerick :

Case in which a portion of a gutta percha bougie broke in the urethra.

On the morning of the 15th of December last, about ten o'clock, Dr. Griffin of this city called on me, accompanied by a gentleman who had got retention of urine. It appeared that this person had stricture of the urethra and irritable bladder for some years, and had used bougies and buchu. He got some gutta percha and worked it up into the form and size of a No. 6 bougie, and had been in the habit of passing it himself. About six o'clock on this morning, he got out of bed to pass this bougie, and having done so, removed it, and went to bed. Again, in about two hours, he got up to pass water, but found he was unable to do so. He then became alarmed,

and examined the bougie, when he found that about one inch had been broken off from the point, and had no doubt but that it was in the urethra, although he could not feel it there. He therefore called on Dr. Griffin, who came with him to me. The calls to make water during the day became so frequent and distressing, and the bladder so distended and painful, that he was very impatient and urgent to have some operation performed, so as to relieve his suffering before night. He was able at this time to pass a few drops of water, but not sufficient to give any relief. In the latter part of the day, Dr. Griffin and I thought it best to cut down on the stricture, relieve the retention of urine, and if possible remove the piece of bougie. We, therefore, tied our patient as if operating for stone, introduced a grooved staff as far as it would go, which was about to the membranous portion of the urethra, cut into the perineum in the usual way, with a scalpel laid open the urethra, then enlarged the opening in it with a bistoury, but could not find any bougie. A catheter was then passed from the wound into the bladder, and the water drawn off. The staff was then withdrawn, and a catheter introduced through the natural passage into the bladder, and retained there for forty-eight hours, when it slipped out, and was not reintroduced. The wound was dressed in the ordinary way. After the removal of the catheter, the urine came pretty freely through the natural passage, attended with some pain; a small quantity came through the wound. He continued to go on well, without a bad symptom. In a few days the water ceased to come through the wound, and he passed it more freely than he had done for a long time.

On the fourteenth day from the introduction of the bougie and operation, he found some difficulty in passing water, and after some effort, the piece of bougie came through the natural passage, with a sudden impulse. It was all covered with the incrustation, which was removed from the point to see the size of it when introduced.

In this case a question may arise—Where was the piece of bougie at the time of operation? It could not be felt at any time in the urethra, and must have been in or at the neck of the bladder. He appears to have been fortunate in expelling it without its becoming a second time a cause of retention, or its remaining in the bladder and becoming the nucleus of a stone. The wound is quite healed.

Mr. Tufnell—About four years ago I brought before this Society the case of a ship-carpenter who had labored under a double stricture. On that occasion, I introduced a bougie which I procured from Bewley and Evans, and on which the words "Gutta Percha Company"

were stamped, though in point of fact it was not gutta percha ; and after remaining in the passage for about twenty minutes, when I attempted to withdraw it, I found that it was tightly held at two points—viz., in the orifice of the urethra and at the neck of the bladder—and on using very little force, the instrument drew out exactly as if it had been hot sealing-wax. Now, that bougie was sold to me as one made of pure gutta percha ; but it was not. Oftentimes bougies were constructed of gutta percha, with a certain proportion of carbon combined with it. A bougie of this description was used by Dr. Orr in the City of Dublin Hospital, and it broke off in the bladder. Dr. Orr, with a view of having to cut this man as for the stone, dilated the urethra from day to day, but the bougie was broken up bit by bit, and expelled by the ordinary efforts of the patient in making water. Now, it is not improbable that the bougie used in the case before the Society was one of the kind to which he (Mr. Tufnell) referred.

Dr. Geoghegan—I brought before the Society a case somewhat similar to that mentioned by Mr. Tufnell. The patient was admitted into hospital suffering from stricture of the urethra, accompanied by urinary abscess. I opened the latter freely, and a few days afterwards proceeded to deal with the stricture. Unfortunately, the bougie proved to be one of the brittle instruments described by Mr. Tufnell, and I was not a little surprised when the house-surgeon called my attention to the fact that it had broken in the urethra. Indeed it snapped across with a short fracture, in the same manner as you would snap a piece of liquorice pipe. The abscess did not communicate with the urethra, and I therefore deepened the incision at the seat of the abscess, so as to open the urethra, and removed a portion, but not the whole, of the bougie. With a view to prevent the deposition of calcareous matter upon the fragment left behind, I directed the patient to get small doses of dilute nitric acid, by which means the urine was retained in a hyper-acid condition ; and in a few days afterwards the remnant of the bougie was passed by the urethra, quite free from all trace of calcareous deposition.

Dr. Fleming—I can bear testimony to the danger of using bougies of gutta percha, especially when left in the bladder or urethra for any lengthened period. With regard to the treatment of the case before the Society, although I do not mean to dispute the propriety of the steps adopted by Dr. Wilkinson, I am still of opinion that before the surgeon has recourse to an extreme measure, it would be well to try whether a milder expedient might not prove equally successful.

During the past summer, a man laboring under organic stricture was in the habit of coming to the Richmond Hospital, in order to be relieved by the introduction of a catheter. No. 4 was usually employed to draw off the urine, and the man had purchased a gum-elastic instrument, which he frequently used along with the stilet. On one occasion, however, he introduced the stilet so carelessly, that it did not reach the extreme end of the catheter, and the consequence was, that, on withdrawing the instrument, at least half an inch of it was left in the stricture. Being immediately attacked with retention of urine, he came to the hospital in a state of great agony. Every preparation was made with a view of cutting down upon the urethra, but previously I thought it would be no harm to administer an injection, and place the patient in a warm bath ; and I was happy to find that whilst in the bath, and trying to discharge the contents of the bladder, he shot out the fragment of the catheter. I do not presume to say that a similar line of treatment in the case before us would have been attended with a like result ; but I do maintain that before we resort to extreme measures, a milder and more conservative method should be had recourse to.

Mr. Colles said it might be worth while to mention a rather curious case which occurred during the past summer. A man who had a stricture of some years' standing, was in the habit of passing an instrument of his own construction. It consisted of a common enema pipe, made of bone, about six inches in length, to which, being not long enough for his purpose, he attached a piece of quill of about an inch and a half in length, the entire length of the instrument being seven inches and a half. This novel species of catheter he was in the habit of using almost daily for upwards of two years ; however, one day, while using it in the horizontal posture, it escaped from his fingers and passed up into the urethra, and his efforts to withdraw it only had the effect of pushing it further in, and the quill extremity being towards the orifice, it caught the walls of the urethra and prevented the exit of the instrument. In this way it was gradually forced up, until the point could be felt projecting just in front of the anus. The man was in a horrible state of suffering, and it was necessary to afford him relief on the spot. Not having a proper forceps at hand, he (*Mr. Colles*) caused the patient to be placed on the table in the position for lithotomy, and having introduced a grooved staff along the urethra, until it reached the obstruction, cut down immediately in front of the rectum, passing through the integuments and superficial sphincter muscle in the median line, and pushing the knife

directly parallel with the rectum for about half an inch, the point entered the groove of the staff, and then having withdrawn the latter, managed, with the aid of a dressing-forceps, to dislodge the end of the quill from its place in the bottom of the urethra, and ultimately to extract it. This case, accompanied by a drawing of the instrument, had been published in the August number of the *Quarterly Journal*.

Dr. Geoghegan wished to say, with reference to the propriety of dividing strictures by the knife, that the patient upon whom he (*Dr. Geoghegan*) had operated, had been under observation from that period until the time of his death, which took place in about two years afterwards, and that from first to last he had enjoyed a perfect immunity from pain and suffering—indeed his own expression was that he could make his water as well as when he was a lad.

On Rheumatic Inflammation of the Heart. By *Dr. EULENBURG* of Coblenz.

After a short historical introduction the author relates the history of eight cases which he had had opportunity to collect in the course of the previous year, of which, however, only the following presents any scientific interest :

A boy, nine years of age, had knelt for a long time in damp grass, whereupon the right knee became painful and swollen. External means afforded no relief, on the contrary, eight days later an œdematous swelling of the scrotum and penis took place, which compelled the patient to keep his bed. He stated also that he perceived a sense of drawing from the heart towards the diseased knee, and often complained that his heart pained him ; he was at the same time sad and anxious. He manifested no other pain either of an acute or lacerating character in the cardiac region. Respiration much accelerated. After eight days both inferior extremities were swollen up to the pelvis, the difficulty of breathing increased, and a violent distressing cough ejected thick yellow sputa. In the night, attacks of the severest distress occurred, which passed into a condition resembling fainting. At the commencement of the third week of the disease, the author found the following condition : skin and mucous membrane pale, respiration short, quick and difficult ; elevated position alone supportable, and upon the right side or back, mucous râles in the inferior parts of the lungs. The heart had a remarkable

fluttering movement, 150 to 106 beats per minute. Heart-sound pure and clear ; stroke of the heart weak, rhythm regular pulse small and weak, region of the heart not vaulted, percussion of the same normal. Ascites incipient, scrotum strongly inflamed ; thirst very great, but drinking performed only slowly and with difficulty, on account of the obstruction of respiration. Urine, yellowish-green, tolerably clear. The patient took the iodide of iron, which increased the urine. After some days the difficulty of breathing increased even to asphyxia, which amid low and weak respiratory efforts, terminated in death.

Section. In the pleura about eight ounces of yellowish water ; lungs pale, in their posterior parts infiltrated with serum, no pleuritic adhesions ; in the pericardium about a pint of pale-yellow fibrinous exudation, which was easily separated in thick layers from both sheets of the pericardium, and presented a loose, soft, fibrinous tissue. Beneath this were the serous membranes, smooth, and only at certain points slightly reddened. Heart small and extremely pale. In the middle of the anterior surface of the right ventricle was seated a roundish, firm, fibroid tumor of the size of a hazel-nut, which with the lesser half projected outward from the heart-muscle, but with the other inward upon the endocardium, with a base two lines in breadth ; it was everywhere surrounded by a purulent fluid, so that it at first appeared as if it lay like a loose nucleus encapsuled in the heart-muscle. Four lines above this was a small abscess in the cardiac muscle, which was filled with fresh, white pus, and had the circumference of a small bean ; it was everywhere closed, its cavity roundish, with an uneven surface. The cardiac muscle pale and lax, endocardium the same, all the cavities of the heart empty.

From these cases the author forms his symptomatology of cardiac inflammation, and first of acute pericarditis. Most authors mention, 1. A *pain* which either remains limited to the region of the heart, or extends over the left thorax as far as the shoulder and downwards to the mesogastrium, and is increased by deeper inspirations. The author found this in no case. Laennec also Hope and Bouillaud have directed attention to its absence, and it is very probable that it is almost always a sign of complication with pleuritis or pneumonitis. Later, with copious effusion, a more dull and crushing pain occurs.

2. *Violent febrile phenomena* occur only in very acute cases ; there is then also excessive thirst, but the patient drinks moderately on account of the increasing dyspnoea. The urine is mostly deep red, with a sediment of phosphate of ammonia [?] and uric acid. Profuse night sweats, especially about the head, are seldom absent.

3. At the very beginning a sense of great agony is manifested which increases with the increase of the exudation. Puchelt incorrectly considers as asthmatic, the paroxysms of agony which are expressed by moaning and screaming, quick, short breathing and frequent palpitation. Even in chronic pericarditis the patients complain of this peculiar sense of anguish, which is expressed in every line of the face when exudation in the pleura is therewith associated.

4. The *position* (decubitus) of the patient is characteristic whether the pericarditis be acute or chronic, commencing or developed ; he constantly avoids lying upon the left side, because this increases the oppression and the palpitation. The dorsal decubitus, and with pleuritic exudation the sitting position, for the most part suit the patient.

5. Acute pericarditis is usually accompanied by a cough, which at first has the catarrhal character, but does not afterwards become spasmodic.

6. *Vomiting* is mentioned by Knox, Kreyssig and Bouillaud ; the latter refers it to a complication with inflammation of the diaphragmatic pleura, and explains it by the reaction of the diaphragmatic nervous apparatus upon the nervous plexus of the stomach, intimately connected with it. The author observed it once where this complication was wanting. It also cannot depend upon effusion in the pericardium since it is absent with this, and exists without it.

7. The author enumerates the *physical symptoms*, and observes that they are different at different stages, and with different degrees of exudation. He presents nothing new upon this point. The frequency of the heart's pulsation is remarkable, 140 to 200 strokes per minute, which is still further increased upon the slightest motion. The heart-sounds are for the most part clear and widely diffused. The pulsation of the heart assumes a peculiar fluttering motion, when its action is disturbed by the pressure of a very copious exudation. Hope observed this at times when there was complication with carditis. A quickening heart-stroke is not seldom found, and is the result of the sudden spasmodic contraction of the heart ; it is found also in chronic cases.

8. The *pulse* is constantly small, and in the course of the disease becomes continually smaller, but not intermitting ; when this is the case, a complication with endocarditis appears to take place.

9. The *respiration* is at the same time accelerated, and indeed regularly so without remission. Auscultation discovers *râles*, but this

is not a sufficient explanation. The question of the difficulty of breathing has already been considered.

There is as yet no certain symptom of adhesion of the pericardium with the heart. The author found it twice in the corpse, where he had not been able to diagnosticate it during life. The differential diagnosis of pericarditis and endocarditis is not always easy ; characteristic of the latter is the unusual clearness of the heart-sounds.

Pathological Anatomy. The author did not find confirmation of the statement of Rokitansky, that in the immediate proximity of an abscess of the heart, the muscle is infiltrated with pus, but at a more remote distance is pale, saturated with a sero-purulent exudation and easily lacerable. The isolated, independent form of the above-mentioned fibroid of the heart is interesting, since Rokitansky has observed the like only in the form of whitish stripes, or in various thick, outspread strata, or as irregular knotty masses. The third and seventh observations of the author confirm the experience of previous writers, that adhesion of the pericardium is accompanied with dilatation and hypertrophy of the heart, but in two cases in which dilatation was very great, the author did not find hypertrophy. The slight redness of the pericardium, notwithstanding the moderate exudation, was remarkable ; Laennec had already made this observation. The assertion of Eisenmann that pericarditis and endocarditis always occur simultaneously, is contradicted by the observations of the author, who found each single.

As relates to the *etiology*, cold is the chief exciting cause. Favorable to the development of heart-disease is a definite disposition of the heart, thus in one case a fibrous tumor, in another a previous disposition to palpitations from corporeal movements. Worthy of remark is the occasional more frequent occurrence of rheumatic heart inflammation, even amounting to an epidemic. It occurs also at every age ; the author saw it twice at the age of $4\frac{1}{2}$ years, once at 9, 16, 27, 33, 35 and 36 years ; and only three times in females. Louis also, in 106 cases of pericarditis, found it 79 times in males and 27 in females. The origin of rheumatic heart-inflammation is three-fold : 1. The same rheumatic process, which has been developed upon any other serous or fibrous membrane, is propagated to the pericardium, the cardiac muscle, or the endocardium. This happens most frequently. Or 2, it seizes merely the heart, while the joints are not at all affected ; or 3, the heart-inflammation arises from metastasis, after the disappearance of rheumatism in the joints.—*Schmidt's Jahrbücher*, Sept. 1854.

On the Chronic or Perforating Ulcer of the Stomach. By Dr. GIAC. SANGALLI.

The author describes with great exactitude fourteen cases of simple perforating ulcer of the stomach and duodenum, observed in the *Ospedale Maggiore*, at Mailand, and therefrom deduces the following.

Symptomatology. There are ulcers of the stomach which run their course without any symptom, and suddenly perforate, and terminate in death. As to the positive symptoms of ulcer of the stomach, they are either those of gastric inflammation or of cancer of the stomach—obstinate disturbances of digestion without a coated or red tongue, sense of tension and laceration or of burning at the epigastrium, a sometimes dull, persistent, sometimes a lively pain coming on suddenly. These painful sensations, which occur also with an empty stomach and a temperate mode of life, become worse during the period of digestion and after errors of diet. As to the character of the pain, the author heard it described as drawing in a powerful manner from the epigastrium towards the back, and which is often characteristic, as if a band pressed the stomach upon the vertebral column. The pains yield to no medicine. Later occur nausea, vomiting of a spumous fluid like saliva, at times of chymified nutriments, still later of a blackish fluid mingled with small specks. The blood comes either from the capillaries, in which case the bleeding is sparse and is repeated until the cicatrization of the ulcer; or it comes from the large vessels, and then it is copious and often deadly. The patient becomes emaciated, pale, is frequently constipated, has at times a scarcely perceptible, at times a tolerably strong fever, so that we might be led to suspect an inflammatory process in the intestinal canal. The author here combats in a very satisfactory manner the custom of his countrymen, who upon the occurrence of any apparently inflammatory symptom immediately let blood, “who consider the inflammatory process a fire burning in the organs, and who do not distinguish in diseases either the character or degree of the textural lesion.”

There is also no characteristic or specific symptom of the round ulcer of the stomach. Constatt directs attention especially to the difficulties of distinguishing a tumor in the region of the stomach from cancer, but the author mentions a case in which was found two inches above the umbilicus, and somewhat to the left, a deep-seated tumor, painful to the touch, accompanied with great constipation,

&c., and the section disclosed only a simple ulcer of the stomach ; the tumor was formed from the pyloric portion of the stomach, which was drawn in an abnormal manner to the left and downwards ; the two small circular ulcers of the size of a grain of maize were seated upon the posterior wall in the proximity of the pylorus ; their base contained a fibrous thick cicatrix-tissue, through which the pylorus and duodenum were separated as if by a girdle. This more perpendicular position of the stomach, the author has frequently observed in young maidens. He attributes the same to tight lacing.

The *diagnosis* in the beginning of the disease must frequently fluctuates between acute or chronic gastric catarrh, nervous cardialgia, hæmorrhagic erosions (Rokitansky), and cancer of the stomach. In the latter case the microscopic examination of the matters vomited, but rarely can furnish a solution, for, 1, the surface of an ulcerated cancer produces elements too much changed to admit perhaps of the detection of the histological constituents characteristic of cancer ; 2, the avulsed elementary constituents of an ulcer of the stomach are not always characteristic ; 3, a portion of the cancerous mass rarely separates, and when it does is with difficulty found again in ejected matters ; and finally, if we find, 4, no structures characteristic of cancer, we cannot yet always consider its existence as excluded by diagnosis. But that we may discover many other interesting things by the examination of such masses, the author proves by an observation which he made at Würzburg with Virchow, and where from the presence in the contents of the stomach of the bodies described by Kölliker as the peculiar fibres of the splenic pulp, the connection of the perforated ulcer with the spleen had been able to be diagnosed.

Anatomy. The author found as the first observed step of development a loss of substance of the mucous membrane not quite the size of a pea, of a round or elliptic form, with acute borders falling off perpendicularly, and with a greyish, smooth base never covered with pus. The ulcer slowly extends itself superficially as well as in depth, seizes one coat of the stomach after the other, acquires projecting borders retreating from the base, which also become thicker through the formation of the fibrous tissue, but are as regular and nett as if a piece were pressed or cut out of the mucous membrane with a metallic disk. The thickened peritoneal envelope of the stomach with fibrous tissue of recent date usually forms the base. In extensive ulcers the base is concave, since the loss of substance of the mucous membrane is greater than that of the muscular membrane, and the latter greater

than the exposed peritoneal surface. The borders may be thickened, and the base very firm from peritoneal exudation, but there are found in it no other elements than cellular tissue with a few elastic fibres. Only after agglutination of the basis of the ulcer to the approximate organs, as the liver, pancreas, spleen, can we find upon it the formal elements of these organs.

In recent ulcers, with an almost acute course, the surrounding mucous membrane is found in the condition of hyperæmia; with severe functional symptoms on the part of the stomach, we might suspect chronic gastritis; but in most cases notable alterations of the rest of the mucous membrane are wanting. In the author's cases the size of the ulcers sometimes approached that of a grain of rice or maize or of a bean, but sometimes also reached from two to three centimetres in diameter, the form was mostly always entirely round, at times elliptical or oval. As concerns the seat, in two cases it was at the upper part of the duodenum, those in the stomach are to be found, as observations have shown, especially in the posterior wall of the organ, nevertheless the author did not see them, like Rokitsansky, mostly near the pylorus, but just as frequently at the middle of the posterior wall. The seat in the anterior wall is more dangerous, because there no fixed organs lie to which the stomach can attach itself, therefore sudden death is also more frequent in this case from effusion of the contents of the stomach into the abdominal cavity, an example of which the author relates. It is rare that more than one ulcer exists, in Vienna the author saw once three cicatrices upon the posterior wall. Among the author's cases are found one of several small ulcers in the stomach and a similar one of almost equally large duodenal ulcers.

Anatomical differential diagnosis. The simple round or perforating ulcer of the stomach may be confounded, especially when it is small, with a simple follicular or tuberculous or inflammatory circumscribed ulceration of the mucous membrane. Against the follicular (according to the author, always inflammatory) origin of the simple round ulcer of the stomach above all the paleness of the borders, speaks also the fibrous appearance of the base, the want of a fluid exudation upon the base or in the contiguous tissue, the isolated occurrence, and other similar reasons. By the French (*Compendium de Médecine Pratique*) obliterations of the excretory duct (?) of the follicles are considered as causes of the ulcer in question. The author saw such a case in an insane patient, but here the pea-sized ulcers were scattered over the whole mucous membrane and were otherwise dis-

tinguished from the simple round ulcers by the discharge of a fluid content upon pressure. Tuberculous ulcers are very rare in the stomach ; their fringed borders infiltrated with tuberculous pus, the simultaneous occurrence of such in the inferior portion of the intestinal canal, and the deposition of tubercles in other organs distinguish them sufficiently. In the author's cases the tuberculous ulcer never occurred simultaneously. Only in rare cases could typhous ulcers be suspected, their well characterised form and their simultaneous occurrence in the ileum would render them easily recognised as such. Large ulcers of the stomach might be confounded with *abscesses* proceeding from the cellular tissue, between the pancreas and posterior gastric wall, and opening in the cavity of the stomach. But we know of no observations of such abscesses, and the simultaneous inflammatory phenomena and the presence of pus must determine their diagnosis. The difference between cancerous ulcers and those in question Baillie has already pointed out, and Rokitansky still more accurately developed. The author also refers to them.

Finally, the rents in consequence of *gastric softening* and *ulcerations in consequence of corrosive substances* taken into the stomach, are to be considered in the diagnosis. The relations of the borders of the ulcer, the unequal division of the loss of substance upon the various coats of the stomach, especially the intact condition of the peritoneal coat in the first instance, the discrete form of the simple ulcer on the other hand, and the remaining phenomena of the case, will furnish a solution of the matter.

Pathogeny. The author reviews the opinions of authors from Hunter and Cruveilhier down, confirms essentially the opinion of Rokitansky, according to which the ulcers proceed from hæmorrhagic erosions, but agrees at the same time with Virchow, who refers these erosions to obstruction of small arteries.

The *terminations*, the *signs of the cicatrices* characteristic of simple ulcers, and the *causes of death* are carefully considered by the author. Of the origin of deadly hæmorrhage from the eroded, fatty degenerated splenic artery, the author furnishes an example from his own observations. The perforated opening of the stomach is usually small, round, with abrupt edges, but sometimes larger and the edges torn ; of the latter method of perforation the author relates an example from his own experience ; so also cases of the drawing-in and constriction of the stomach from the healing of ulcers, are cited, with reference to Küchenmeister's observations.

As to the *complications*, the author never found the simple ulcers of the stomach in tuberculous persons or those suffering from cancer ; three times they were coupled with chronic gastritis ; once with cicatrices of burns of old date ; once connected with hæmorrhagic erosions ; in six cases simultaneous lesions of the heart, which had produced somewhat important obstructions of the circulation.—*Schmidt's Jahrbücher*.

PART VI.—EDITORIAL AND MISCELLANEOUS.

The New York Medical Times and Dr. Green.

We must apologize to our readers for a departure we are compelled to make from our established policy in alluding to some matters of a personal character. We have aimed to make this Journal purely an organ for the advancement of medical science and the improvement of the profession. We can safely appeal to the past in proof of the fact that we have not sought to make it the medium for promoting institutional or personal interests. While we have dealt honestly with the professional public in placing the names and position of the conductors upon the cover, no one could have inferred from the *contents* of the Journal its connection with any school. The New York Medical College has never been lauded in its columns, its professors have never used it to thrust themselves conspicuously forward, no article has ever been published from the Faculty, which would not have been equally admissable, in any other *respectable* Medical Journal ; none which has not been, by the kindness of our fellow laborers, more or less extensively copied into other journals in this country and in Europe, some having been translated into the French and German. We have had no controversy with any other journal, have disparaged no other schools, and have assailed no individuals. All other schools which adopt the recommendations of the American Medical Association, can equally avail themselves of its columns to advance their interests, and every individual legitimately in the profession, who seeks by meritorious contributions to *science*, to win a name and an honorable fame, has the same facility with ourselves through the medium of the Journal.

We regret that we are now compelled to notice again a personal attack on one of our conductors in the March number of the New

York Medical Times, which for malignity and mendacity, we believe to be unparalleled in the annals of medical journalism in this country. From the editorial comments on the last annual meeting of the New York State Medical Society, we quote :

"The *most remarkable paper* was read by Dr. H. Green, on "The Cauterization of the Bronchi, and the treatment of Tuberculosis by injections of nitrate of silver into the tubercular cavities of the lungs." *Thirty-two cases* were noticed as having been treated by him *since the 13th of October, 1854*, "*nineteen* of them showing unequivocal symptoms of tuberculosis, in different stages ; all of which, with one or two exceptions, appeared to be benefitted, some of them greatly, by his method of topical treatment." He adds : "This treatment has already afforded the most gratifying indication that practical medicine will be greatly advanced by this discovery." Now, will it be believed that this same paper, or the substance of it, had *already been read* before the Academy of Medicine on the 3d December last, and referred to a committee *for examination and report* ; was published to the world by Dr. Green in the January number of his own Journal (the "American Medical Monthly"), and sent broadcast over this country, and undoubtedly to Europe. Dr Green has met the committee several times, both at his office and at Bellvue Hospital, for the purpose of practically testing his operations. Thus far, as we are informed by one of the committee, nothing has been proved, except that Dr. G. has *misrepresented facts* in various particulars ; in one case, the autopsy of which we ourselves witnessed, the *operation proved fatal* in less than forty-eight hours. We ask then, was it *fair*, was it *honorable*, thus to *forestall public opinion*, and endeavor to get the start of the report of the committee, which we well knew, would be adverse to his pretensions and practices. We submit it to the profession, as we admit that we may be so biased by our long controversy with Dr. G. that it would be improper in us, at this time, to give our own opinion. We are perfectly willing to leave him in the hands of the committee, beseeching them, at the same time, *to have mercy upon him*.

The paper was ordered to the Committee on Publication."

This appears over the signature of J. G. A., one of the editors. A fashion has prevailed here of ignoring attacks from this quarter on account of the irresponsibility of the source. When attacks, grossly personal and maliciously false have been made, some have been in the habit of asserting, and repeating as if it were a proposition not to be contradicted, that individuals assailed have no right to repel the aggression, when it comes from a source notorious only for moral imbecility and mental incapacity. Were the results of these attacks confined to this city, no harm would result to any one from tacitly submitting to such a rule of conduct. But it is now high time to put a stop to such detestable cant and arrant hypocrisy. It is time

to place the responsibility where it belongs, on those, who, assuming to be friends, use him as a tool, and on those who thrust his name forward without the slightest opposition to certain insignificant posts in medical societies, and thus permit *him* to delude himself with the idea that he holds some position and standing. They, and they alone, are accountable for the consequences which may accrue to him individually from a repulse of the assault. Forbearance, by the request of respectable pretended friends, has been exercised until "patience ceases to be a virtue." If insects annoy, they must be brushed off; if a reptile stings, it must be crushed. If a besieging enemy should assault a peaceful town, and placing their wives and children in front of the battle, should appeal to the magnanimity of its inhabitants to permit themselves to be destroyed, the dastardly cowardice of the attacking party would be deemed responsible for the deaths of the feeble women and the defenceless children, if such a result was necessary for a successful defence.

Dr. Green has no controversy with J. G. Adams. He can have none with a man who has forfeited all claims to the courtesies of a gentleman, who exhibits his malignity on every possible occasion by such contemptible blackguardism of manners as only inspires contempt and disgust. He can have none with a man who has no business in a profession which he dishonors by *nominally* belonging to it, while he spends his whole time in hunting up and retailing the petty gossips and malignant scandal incidental to all communities, and who, finding "Othello's occupation gone" in New York, has been proved to have traduced and maligned a fellow-townsmen and member of the same society with himself, in a foreign country and in a foreign journal—who has been repeatedly convicted, and even *self-convicted*, of the most barefaced and impudent falsehoods. He can have no controversy with a man whose friends tacitly endorse his slanders until they are driven to the wall, and then attempt to deprecate a defence because they come from a source which cannot be regarded as either morally or mentally responsible. Dr. Green, we are well assured, has not ever seen the extract we have given above, and has nothing to do, directly or indirectly, with this reply.

But we assert that it is absolutely and unqualifiedly false, in every statement made, except the following: Dr. Green has met the committee several times, both at his office and at Bellevue Hospital, for the purpose of practically testing his operations. First. The title of the paper read before the State Medical Society is falsely given. Second. It was not "the same paper or the

substance, which had already been read before the Academy of Medicine on the 3d of December last, and referred to a committee for examination and report, etc." Third. J. G. Adams has not been informed by one of the committee that "nothing has been proved," for it has been proved that a tube can be passed into the bronchii, and that injections of the sol. of nitrate of silver can be safely thrown in. Fourth. We assume that no one of the committee has informed J. G. Adams "that Dr. G. has *misrepresented facts* in various particulars." The following gentlemen constitute the committee to whom the paper read by Dr. Green before the Academy of Medicine was referred : Drs. Willard Parker, A. H. Stevens, Isaac Wood, James Anderson, J. O. Stone, B. F. Barker and J. T. Metcalfe. No one of this committee would *dare* to jeopardize his position and reputation by such an assertion, and we are equally certain that no one would wish to do so. Fifth. J. G. Adams asserts that "in one case, the autopsy of which we ourselves witnessed, *the operation proved fatal* in less than forty-eight hours." The meaning intended to be conveyed is evidently, that one of Dr. Green's patients died from the effects of his operations "in less than forty-eight hours." Such would be the natural inference from the Jesuitical construction of the sentence. But nothing of the kind has occurred. There is not the slightest foundation for such a story, and J. G. Adams has therefore left a loophole of escape by his equivocal mode of expression. We are entirely ignorant of the slightest rumor of such a result having followed the operation by any one. It would be very curious if such an event has occurred, and has thus far been carefully concealed from the profession and the public.

In conclusion, we will only say, that Dr. Green can with confidence await the report of the committee, and with equal confidence he can await, as he has formerly done, the decision of the profession at large, both in this country and in Europe, to whom his papers are referred "for examination and report," as a great "Committee of the whole."

It remains to be seen whether self-respect and a decent regard for the position which he has hitherto held, will permit Dr. Bulkley to remain associated with J. G. Adams in connection with this journal.

* * *

The New York Medical Times against the American Medical Association and the New York State Medical Society.

The lecture terms at the colleges have closed, and their faculties are now busily occupied in the examination of candidates for graduation. We know not whether the *farce* which has for two years past been enacted by the presence of an *inquisitorial committee*, appointed by the State Medical Society, will, this year, be repeated. This, however, we do know, that it was ill-judged to attempt to force upon any institution a committee so loosely constituted, and selected without regard to qualifications. In looking over the minutes of the State Society, we do not see that any such committee was, this year, appointed. If so, there will be so much saved in oysters and champagne by the colleges which have submitted to this star-chamber investigation. Let the committee be properly appointed, and we have no doubt but that all the colleges will agree in receiving it.—*New York Medical Times, March, 1855.*

At the first annual meeting of the American Medical Association, the Committee on Medical Education, of which Dr. A. H. Stevens was chairman, submitted the following among other resolutions:—

Resolved—That this association recommend to the faculty of each medical school to conduct the final examination of candidates for the diploma, in presence of some official person or persons qualified to recognize the attainments of the candidate, but who has no pecuniary interest in the institution or in the number of its pupils.

This resolution was adopted by the association, and probably no resolution has ever passed this body which more successfully expressed the general sentiment of the profession.

In accordance with the spirit of this resolution, the New York State Medical Society first appointed the censors of the southern district a committee to attend the examinations of the medical colleges of the city of New York.

In the report of this committee to the society, they say, "The manner in which examinations for degrees are now conducted, render it impossible for so small a committee as one composed of your censors alone to attend all of them regularly. It is therefore respectfully recommended to the society to increase the size of the committee to such extent as may be deemed by you advisable." It was therefore voted by the society "that nine persons be added to the committee of censors, to attend the examinations at the medical schools in New York." This committee need no defence by us from the malicious attack of the *New York Medical Times*, which we have quoted above. We are confident that our exchanges and the profession at large will consider the names of the committee (which we give below) a sufficient answer to the contemptuous sneer at their qualifications.

The censors appointed for the southern district at the annual meeting, February, 1853, were—Drs. John C. Cheeseman, William Rockwell, and Joel Foster. The nine added were—Drs. Thomas F. Cock, James R. Wood, John K. Van Kleek, E. L. Beadle, Ab. Du-bois, R. S. Kissam, J. H. Browne, S. S. Purple, and L. C. Ferris.

How much of a “farce” the “star-chamber investigation” of this “*inquisitorial committee*” proved to be, may be inferred from the following extract from the report of the committee made to the State Medical Society at their annual meeting, February, 1854 :—

“The censors of the southern district and the committee of nine added to their number at the annual meeting of the society, in 1853, to attend the examinations of the medical schools in the city of New York, beg leave respectfully to report that :

“They received invitations from the faculties of the College of Physicians and Surgeons, in Crosby street, and from the New York Medical College, in Thirteenth street, to attend their examinations, which they accepted. They attended the examinations of these two schools with great satisfaction. They appeared to the committee to be thorough and searching, and we are satisfied that no gentleman received a diploma that was not fully entitled to the same.”

We can give the remainder of the report, if desired. It was signed, “in behalf of the committee, William Rockwell, Joel Foster, James R. Wood.”

* * *

Medical Commencements in New York.

The annual commencements of the three medical colleges of this city, were held on the evenings of the 1st, 7th and 15th days of March. We give a short sketch of them in the order in which they occurred, chiefly condensing our reports from the newspapers whose reporters were present :

“The middle lecture room of the New York Medical College was crowded to excess on Thursday evening, March 1st, at an early hour. Dodworth’s Band kept the audience in good humor until the exercises commenced, and between each of the graver exercises of the occasion performed some favorite pieces of music.

At 7½ o’clock the gentlemen of the Faculty and of the Board of Trustees and Censors marched into the room and took seats upon the platform erected for the occasion.

HENRY E. DAVIES, Esq., one of the Trustees, took the Chair.

Rev. Dr. TYNG made the opening prayer.

Dr. FRANK TUTHILL, for the Censors, made a statement of the qualifications and ability of the members of the Graduating Class, as discovered by the thorough examination to which they had been subjected by the Faculty in presence of the Censors of the College and of the State Society. He explained the office of the Board of Censors, narrating the reasons of its creation, approving the wisdom on the part of the Faculty who had invited this Cerberus to stand between the applicants for graduation and the profession, to receive all the cudgelling in case unworthy members should be admitted, and to withstand as well as they may, the piteous pleadings of the rejected applicants for professional honors. The daily quiz by each professor was commended as likely to secure the habit of learning definitely what is presented to the mind, and of expressing in words what one knows. He alluded to the busy life of the medical student. What with his attendance upon hospital clinics, in which no city is richer than this, upon the six daily lectures and at the dissecting room, his *ingestion* is prodigious, his *digestion* anything but remarkable. Another point upon which the Censors charged him to speak flatteringly was the expertness of manipulation, which the gentlemen had exhibited in the Chemical Laboratory. The Board, he said, felt a confident assurance that no member of the Class about to graduate would ever entail disgrace upon the profession or shame his *Alma Mater*.

Dr. HORACE GREEN, President of the Faculty, administered to the candidates the Hippocratic Oath, after which the degree of Doctor in Medicine was conferred upon the following gentlemen :

Louis Archambault, Paris, France ; Joseph P. Pride, Alabama ; William T. Abrahams, Alabama ; Edward F. Arnoux, New York ; William W. Simpson, Pennsylvania ; Alonzo J. Phelps, Ohio ; Samuel H. Hurd, Massachusetts ; Orville N. Ellis, Ohio ; Augustus C. Reed, New York ; Edward P. Fowler, New York ; William O. McDonald, New York ; Willey J. P. Kingsley, New York ; Maurice Pengnet, New York ; Henry Sanders, New York ; Gustave Coutin, Mauritius ; John S. Carrington, Louisiana ; James D. Johnson, London, England ; John Lower Firestone, Ohio ; Robert P. Gibson, Maryland ; William T. White, Maine ; Hermann M. Brandis, England ; John Maurer, New York ; John O. Bronson, Georgia ; Charles W. Packard, Massachusetts ; Antoine Longpre, Canada East ; Mosby S. Duval, Virginia ; Judson Judd, Massachusetts ; Asa W. Wilkinson, Rhode Island ; David W. Flournoy, Virginia ; John Becker, Germany ; A. C. Wood, Kentucky ; Benjamin C. Ludlow, Ohio.

Dr. GREEN continued as follows :

“ Although it is the province of another to address you this evening, gentlemen, I cannot allow this last opportunity to pass—after a

season spent so pleasantly together—without detaining you for one moment, to listen to an expression of gratitude and a word of advice.

The students of this college will do its professors the justice, I believe, to say, that in no way have they been led to infer either before or since their connection with this Institution, that its requirements would not be rigid. On the contrary, they have been given to understand, all along, that to obtain its honors, high attainments as medical students would be demanded. These requirements have been met by you, gentlemen, in a way that has been honorable to yourselves and gratifying to your instructors.

Throughout this long session of study, although required to attend daily, so large a number of lectures, yet, in the case of many of you, unless detained by indisposition, I have not seen your seats vacant in a single instance.

For this assiduity and devotion to the studies of your profession, and for your constant, gentlemanly bearing, in my own, and in the name of my colleagues, I thank you.

But I should do injustice to the noble profession you have chosen, although your acknowledged acquirements have just secured to you its honors, were I to allow you to depart with the delusion—a delusion too often entertained by the medical graduate—that *you have completed your professional education!*

We, your instructors, have only been able to assist you through the intricacies and the entanglements of the way, and to conduct you to the open field. ‘To make a full and deliberate survey of the whole territory’ of medical science, is now your labor, and it is the task of the years of your future life. Be not satisfied with *mediocrity*, but seek for high attainments in your profession; and remember, it is only by a steadfastness of purpose, by an unwearied devotion to some single, but great object, that the efforts of genius, in any pursuit, or in any department of science are ultimately crowned with success.

“It is by dint of steady labor,” said the immortal Chalmers, “it is by giving enough of application to the work, and having enough of time for the doing of it—it is by regular painstaking and the plying of constant assiduities—it is by these, and not by the process of legerdemain, that we secure the strength and the staple of real excellence.” It was thus that Demosthenes, clause after clause, and sentence after sentence elaborated, and that to the uttermost, his immortal orations; it was thus that Newton pioneered his way by the steps of an ascending geometry to the mechanism of the heavens, after which he left this testimony behind him, that he was conscious of nothing else but a habit of patient thinking, which could at all distinguish him from other men!

Let me then urge it upon you, gentlemen, as the last and best advice I can possibly impart to you—seek to establish these, as the three great habitudes of your future life—through which success will crown your efforts—*careful observation, reading, and “a habit of patient thinking;”* for these are the elements to which genius, in any

department of science, owes her best and the proudest of her achievements.

Before I sit down I have another and a less pleasing duty, which I have just been called upon to perform, in relation to the death of one who presided on this platform at our last commencement.

At a joint meeting of the Trustees and Faculty of the New York Medical College, held at their rooms this evening, the following resolutions were adopted :—

Resolved—That it is with sentiments of profound regret that we have to record the recent death of the Hon. Henry Pierpoint Edwards, Vice-President of the Board of Trustees of this College.

Resolved—That in the death of Judge Edwards this institution has lost one of its most valuable and efficient friends, and the Trustees and Faculty an associate of the highest honor and integrity of character, and one whose death we deeply deplore.

In announcing these resolutions, I can only allude to that mysterious Providence which, by the death of Judge Sandford and Judge Edwards, has bereft this institution of two of its most distinguished and devoted friends, each of whom at the time of his decease was Vice-President of its Board of Trustees, and both of whom were eminent as jurists, and highly beloved and esteemed as citizens ; and whilst we would acquiesce with entire submission to these orderings of a Higher Power, we cannot but regret that our young institution should have been so early deprived of the influence of those who were deeply interested in its welfare, and who, as its officers, had already contributed so much to its honor and usefulness."

The President introduced to the audience Dr. Henry G. Cox, President of the Medical Board of the Emigrant Hospital at Ward's Island, who addressed the new graduates eloquently, and with great acceptance, for some three-fourths of an hour. His address was interrupted, as had been the preceding exercises of the evening, with frequent applause.

We have the pleasure of laying the whole of the address before our readers in this number. At the close of the address the audience proceeded to inspect the museum and the general arrangements of the building

"The large chapel of the University was crowded on the night of the 7th March with ladies and gentlemen, gathered to attend the graduating exercises of the Medical Department of the New York University, Fourteenth street. Prof. W. H. Van Buren delivered an elegant address to the class, of which we are not able to give a word. Chancellor Ferris conferred the degree of Doctor of Medicine upon the candidates for graduation.

"The annual commencement of the College of Physicians and Surgeons, Crosby street, was held at the lecture hall of the institution. Dr. Cock presided, and presented the diplomas to the graduates.

"The orator of the evening, Professor Joseph M. Smith, read an elaborate and able essay, which was well appreciated by the audience. Many hints were thrown out by the Professor which will be of service hereafter to the graduates to treasure up. The exercises concluded with prayer by Rev. Mr. Draper."

MEDICAL PRACTICE AMONG THE INDIANS.—We are permitted to make the following extracts from a letter received by a distinguished physician of this city from an intelligent medical officer of the army. Its statements are novel and striking :—

I wish to give you a few facts in relation to a popular Indian remedy in use in all the tribes, where the article can be obtained, between the Sioux boundaries on the Missouri river, and the Cascade Mountains of Oregon, viz., the rattle of the rattle-snake. This is used by the Blackfeet in tedious cases of labor, and to produce abortion. The Wascos of the Columbia use it in tedious labors only. The latter people do not appear to be in the habit of producing abortion, preferring infanticide. One of our men was once offered a good buffalo robe by a Blackfoot squaw in exchange for the tail of a rattle-snake.

There must be some power in the article or else it would not be so universally used by Indians so remote from each other, and so totally different in language, modes of life, &c. Judging from reflection, I should suppose that its action, if it has any at all, must be very similar to that of ergot, which will, as you know, frequently assist labor, when given at the proper time, and will also undoubtedly bring about premature labor if administered early.

The dose of rattle-snake tail is *one* rattle, or *two* if the case is a bad one. It is pulverized and administered in a little water. Obstetric cases requiring anything of the sort are so rare in this country that I cannot experiment. I enclose, however, to you, one bunch of rattles, and will send more when I can obtain them. After which you doubtless can find out by experiment whether any reliance can be placed in the article or not.

If it should be found to be a good substitute for ergot, the fact is important, and should be made known. Frequently physicians are isolated in the Far West, on emigrant trails through the "mauvaise terres" of the Upper Missouri, or the desolate alkaline deserts of South-eastern Oregon, hundreds of miles from medical supplies, where the simple knowledge of a substitute for ergot may save many lives. I therefore respectfully submit the article to your investigation.

Some of the Northern Indians (Chippewas, I think,) use the blood of the garter-snake (*Eutainia*) in tedious obstetric cases.

Abortion is produced also in another way by the Blackfeet and other tribes east of the Rocky Mountains, by pounding the breasts. This is done by the squaw herself, until the mammæ are "black and blue." Sympathy then produces uterine contractions.

The Chinooks of the Columbia River produce the same by the belly of the pregnant woman being violently rubbed for a long time by another woman; but in general the women on the Pacific coast prefer allowing things to run on until they are naturally delivered, whereupon they immediately throttle the infant.

The Indian women of Oregon generally cure their gonorrhœas in five days; what their process is I cannot find out. Although I talk Chinook fluently, the squaws are really so modest that it is much easier for a man to sleep with one than to get her to talk about sexual diseases, and I can get but little out of them.

The Indians of Puget Sound, and I believe all the salmon-eating tribes, appear to have their children about nine months after the salmon season. On the sound, the men have, to use a common expression, a rutting season; this lasts from the middle of May until October or November. It is, however, most violent in June. The squaws and men are then both very amorous. At other seasons of the year both sexes are cold and without passion. This cannot be owing to want of food, as they have in that locality an abundance throughout the year.

It is said that these Indian women carry their first child ten months, and those subsequently rarely over eight months. I will examine further into this.

Many facts strongly impress upon my mind the truth of Laurence's theory, backed more recently by Agassiz, (*vide Nat. Hist. of Man—Laurence*), that the red man is not descended from the same Adam that we are, Pritchard to the contrary notwithstanding.

The Health Officer—Political Appointments.

The long agony is over, and Dr. R. H. THOMSON, of Albany, has been confirmed as Health Officer by the Senate, after having considered the matter for two months and more. The appointment, whether good or bad, was evidently made with special reference to political matters. He was early nominated by Governor CLARK, and we understand that there was no personal objection to him on the part of the majority. But things were not quite smooth between the Governor and the other State officers. The Senate was divided, and having nothing special to do in the emergency, just held the nomination in its hands—the Doctor a hostage for the good behaviour of the Governor as touching the nomination of Harbor Masters. On Wed-

nesday last Dr. Thompson's case was considered in Executive Session, and a vote being taken—rumor says this only, for the Session is held with closed doors—the vote of the Lieutenant-Governor was necessary to turn the scale in favor of the nominee, and it was given. The thing has an intense interest for politicians, as it was made the turning point of many other appointments. The Senate has still a week—until April 4th—to reconsider its vote, but probably this is the end. It is proper to add that the bill cutting down the Health Officer's salary from about \$30,000 to \$8,000 annually, has never been urged, and never will be, unless some new need should arise to "head" the Governor. Now the next rush of the M. D.'s ambitions for political positions will be to fill the birth of Physician to the Marine Hospital on Staten Island. We are not informed of any lack of applicants, indeed the "crowd upon our columns," unless we enlarge forever, forbids our enumerating the list of "hopeless" whose sleep is lessened, nights, from anxiety to enjoy it. We entreat all doctors who have practice enough to live on, or money enough to enjoy life without these gifts of political bodies, to let the offices seek them, not they the offices. As things now go, it is sure that medical skill or professional ability is the last point mooted when the candidate is up. One who casts his bread upon such waters, may as wisely not look for much to come to him again from the quieter waters of purely professional life.

These remarks are made without any reference to the new incumbent of the Health Office. For anything we know, he may be the very man of all others for the place. But if he is, *that* was not the reason of his election.

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THE TRANSACTIONS.—A good degree of amusement has been afforded by the language used by some editors of medical journals concerning the transactions of the American Medical Association. There are gentlemen who believe in Philadelphia and in no other place. Some of them thought New Yorkers could not print as well as they do in Philadelphia ; others seemed to believe that they had a prescriptive right to the business there. Now, the volume shows that printing can be done here, and that it can be done well. The committee might have avoided some inaccuracies if they had had more leisure, and they ought to have shielded some of the authors from a display of ignorance by correcting their formulæ. There is one dilemma, however, in which these gentlemen place themselves. They assert

that this volume was delivered in Philadelphia but a few days sooner than in the preceding year the sixth volume was distributed. Now we assert that this is not true of any other place than Philadelphia, and either the profession there have been favored and members elsewhere neglected, or there is some error in the statement. It is a matter of curiosity whether or not the whole profession of Philadelphia, who are members, are furnished with *bound* volumes previous to this year at the same expense that we provincials have paid for *paper* covers. This has been asserted, but it does not seem credible that there should be such injustice.

A NUT FOR THE ACADEMY.—Once upon a time, this learned society was applying to the Legislature for an act of incorporation, and among difficulties innumerable, it sought the efficient aid of Dr. Frank Tuthill, then an influential member of the Assembly. By his efforts mainly the charter was obtained. Some time after Dr. T. removed to this city, and is now well known as one of the editors of the *Daily Times*. Will it generally be credited that his formal application for membership was allowed to remain before a committee unnoticed for six months, and was then withdrawn by him in disgust. It is *not* true, as has been asserted, that he does not now practice medicine, but if it were, he is daily, as editor, doing more for the profession than its most talkative secretary, and it would not be straining the dignity or by-laws very far, for the Academy to make the conferring of membership *which is unsolicited*, an acknowledgment of its indebtedness to him.

PROFESSOR BRAINARD'S PRIZE ESSAY.—Sundry journals are down on Dr. Brainard for presenting for competition for the prize an essay previously printed abroad. It rather appears that the fault, if any exists, is not with the author but the committee on prize essays in not being sufficiently "posted up" in the matter. Under the rule of excluding all essays whose authors are known, this would have been shut out if the committee knew of its previous publication. Under any light, however, there can be no more objection to Dr. B.'s course than to that of others who have sent in articles with their names attached, as if to say to the committee you dare not give the prize to any one else.

AMERICAN MEDICAL ASSOCIATION.—The eighth meeting of this society is to be held in Philadelphia, on the 1st day of May next, and societies which have not appointed their delegates should do so at once.

We make the following extract from a Paris letter in the *Commercial* :

Richard S. Kissam, Jr., aged nineteen, a son of Dr. R. S. Kissam of New York, a young man of great promise and of extraordinary personal attractions, died on Sunday evening last, after a few days' illness, with what French physicians call *peritonite foudroyante*. His body has been embalmed, and will be sent home on the steamer *Union* from Havre.

Our heartfelt sympathy is tendered to the bereaved family in their bitter sorrow.

ITEMS.

The Michigan Legislature has passed an act requiring the Board of Regents to establish a *Chair of Homœopathy* in the Medical Department of the University of Michigan.

The Boston Medical and Surgical Journal has changed hands, and is now under the editorial supervision of Drs. Wm. M. Morland and Francis Minot. We have read their salutatory with interest, and from our acquaintance with the senior editor, feel assured of the continued success of this journal.

†††

NEW REMEDIES.—Dr. Todd has found inhalations of turpentine useful in hæmoptysis, at King's College Hospital. There has been much talk of late of the curious results of the experiments at Edinburgh, with the salts of tellurium. A case of enlarged spleen has been cured by bromine. A case of fracture remaining ununited for four months, from scurvy, recovered under the use of lemon-juice. In Italy a watery extract of belladonna is used instead of ergot ; it is said not to act by paralyzing the muscular fibres of the os uteri, but by stimulating those of the uterus, a function denied to ergot in that country.

LEECHES.—A dealer in leeches in France has been fined fifty francs and sent three months to prison, for selling certain other annelidæ as leeches. Thirty per cent. of one consignment consisted of these strange animals.

FISTULA LACHRYMOLIS.—Demarquay of Paris has treated three cases of this disease by trephining the os unguis, with success.

THE MEDICAL PROFESSION IN BURMAH.—The physician formerly ranked high among the Burmese castes (though not at the present day), since, according to the laws of Menoo, he is one of the *six* persons who are to have the road yielded to them. The reasons for this are, that the physician has studied the books regarding the four elements, and relieves mankind. If an inferior person *unintentionally* obstructs the road, no punishment is to be inflicted ; but if it be done intentionally, and with the knowledge that the person coming is one of these six classes, and the offender shall come and forcibly strike against him, “let him be punished criminally to the extent of *one thousand stripes of a rattan!*”

MEDICAL DEPARTMENT OF HARVARD UNIVERSITY.—Dr. Jacob Bigelow has been succeeded in the Chair of Materia Medica by Dr. Edward H. Clarke. Dr. George C. Shattuck has been appointed Professor of Clinical Medicine.

Three members of the Medical Class in the University of Michigan, at Ann Arbor, died of small-pox during the winter. The disease has been epidemic in that place and vicinity.

Dr. A. H. Hassall's “Food and its Adulterations” has been reprinted from the *Lancet*, with cuts, and sells at twelve English shillings. What publisher will give a cheap edition to the American market?

A son of Prof. Owen, of London, has, in compliment to his father, been appointed to a clerkship in the Foreign Office.

THE AMERICAN MEDICAL MONTHLY.

MAY, 1855.

PART I.—ESSAYS, MONOGRAPHS, AND CASES.

British Military Medicine and Surgery in the Crimea. By E. R. PEASLEE, A. M., M. D., Prof. of Anatomy and Surgery, &c.

“Within a few months fifty-four thousand picked men have left England for the East.

“What has become of these fifty-four thousand Englishmen?”*

As a reply to this question, the London Times of February 15th, states :

“These fifty-four thousand men have shrunk to *one-fourth of their number*. With lines more extensive than the French, the latter have seventy thousand men, and we, (the English,) only fourteen thousand.” Some accounts reduce the number remaining to ten thousand ; and an officer writes, “we have not five thousand men fit to be out of a hospital.” And more recently we learn that the English forces have retired from before the walls of Sebastopol, and constitute the *reserve* of the allied army ; being also “entrusted with the defence of Balaklava.”

By our previous article on “the wretched sanitary condition of the English army in the Crimea,”† the readers of the MONTHLY

* London Lancet, March, 1855, p. 281.

† February number of the Monthly.

were somewhat prepared for the announcement above made. We then more particularly considered the subject of military *hygiene*, we now ask attention to the details of medical and surgical practice in the Crimea, and such remarks as they have suggested.

We will premise, however, that even up to February the English army was still almost totally destitute of fuel, and that there was also a scarcity of forage—even the horses of the superior officers not having had any served out to them for several days. A letter dated January 13th states, “that whole English regiments are eating raw food for want of fuel; and the poor men are also seized with frost-bitten limbs while asleep.” Forty men lost their toes by freezing thus on the night of January 11th. Two miles of the railroad from Bala-klava to Sebastopol had been laid out by Mr. Peto and his twenty-thousand laborers.* And a London firm, in the provision trade, had *proposed*, through the Times newspaper, to supply the whole army with food; giving three meals a day for three shillings and six pence per head, and providing excellent tents for three pence more. And the newspaper suggests that the whole job of taking Sebastopol be let out to contractors by the Government, if such can be found.†

We have, in the article before alluded to, asserted the paramount importance to an army of *military medicine*, when compared with mere military *surgery*, as it is generally understood. The correctness of this assertion will be demonstrated by the facts which follow. We have also expressed our belief that the medical men connected with the army in the Crimea have done all they could in the circumstances. But the facts we now have to state show that the system itself is radically deficient; and that no injustice may be done, our information will be obtained only from *English* sources, whether medical journals or the newspapers of the day, and with these remarks we enter upon the task before us.

* Three miles were finished on the 1st of March, and in operation.

† Accounts up to the 24th of February, state the sanitory condition of the army is improving. A vast mass of putrifying matters was, however, lying about the camp; *one hundred and forty-seven dead horses in a heap in one spot*. This portion of the cavalry will doubtless exert no small influence on the health of the army when the warm days of Spring return.

We have given the statement of the Times that only fourteen thousand of the original fifty-four thousand men remain in the Crimea. We were told by the London Lancet at the same time that eight thousand were confined in the hospitals; thus only twenty-two thousand out of the whole number were still living—*thirty-two thousand* having “slept their last sleep, and fought their last battle!”

The mortality in a few of the divisions in which it has been specified, is as follows:

The fourth division landed in the Crimea nine hundred and seventy strong, and afterwards received a draught of thirty men. It now has but thirty remaining—officers, regimental staff, and all hands included. The Forty-sixth regiment left England eight hundred and fifty strong, and on the 10th of January had but seventy available men remaining. Of the Sixty-third regiment, nine hundred men, only forty remain on duty. The Fusiliers had but two hundred and ten men left out of fifteen hundred and sixty-two; and a grenadier company of one hundred and twenty men was represented by a *single sergeant alone!* And less than one-tenth of the cavalry remained in the field, the horses having died, partly of starvation, and partly from the improper kind of labor imposed upon them in dragging stores through the deep mud from Balaklava to the camp.*

But what was the immediate cause of the frightful amount of mortality above mentioned? The killed in battle and those who had subsequently died of their wounds, taken together, could constitute but a small part of the thirty-two thousand. Up to the 1st of December we are told that the total mortality in the Crimea had been four thousand one hundred and thirty-two, though the battles of Alma, Balaklava and Inkerman† had been fought. Of these, thirteen hundred and fifty had been killed in battle, and two thousand seven hundred and eighty-

* Lord Lucan, commander of the cavalry, states that he lost eleven hundred horses from the 8th of October to January 1st; their average value being seventy-five pounds each, though the authorities might have obtained mules from Asia Minor at twenty-five pounds each, to do the work which killed the horses.

† On the 20th of September, the 25th of October, and the 5th of November.

two had died of diseases and of wounds. Supposing even one-half of the latter number to have died of wounds, about fourteen hundred (thirteen hundred and ninety-one,) had died of disease in the Crimea before December 1st. As there has been no battle since that date which affects the *data* we are now considering, the number of killed and wounded since is comparatively small. Most of the time the fire has been feeble on both sides. The greater part of the loss has been produced by the sorties at night of the Russians, and these have been generally repulsed by the French.

But if we suppose that even twelve hundred had thus been killed, or had died of wounds incurred as just mentioned, from December 1st to February 1st, we shall then have four thousand at the utmost, (three thousand nine hundred and eighty-two) as the number of killed, together with those dying of wounds since the army landed in the Crimea; and this number deducted from the total, thirty-two thousand, will leave the astounding balance of *twenty-eight thousand* men who have died of *disease* alone since the army left England. And if the report be correct, that about ten thousand died in Turkey and on the way thither, then it follows that *eighteen thousand men have died of disease* since the English army landed in the Crimea on the 14th of September last. Surely the physician more than the surgeon was needed by all these.

Now, before entering upon the particulars in regard to the causes of this mortality, we will express our opinion that at least one-third, (probably more than one-half,) of this amount of disease and its consequent mortality, would have been prevented by proper hygienic arrangements devolving upon the commissariat department, especially in regard to food, clothing and fuel. But this we have explained in our previous article, and shall estimate that at least ten thousand out of the thirty-two thousand soldiers have been sacrificed to a neglect of military hygiene; for we shall see that the diseases which have proved so fatal, are, to a great extent, preventable by proper precautionary measures.

But if we also add, that of all who have died, at least *ten thousand more* might also have been saved, in spite of the fact that the previous cause had produced the diseases, if the best

medical and surgical services in all respects could have been rendered, we think we shall not be thought to have made an extravagant estimate after our *data* are examined; for it will appear that the diseases are to a very great extent curable, and yet we believe that physicians and surgeons alike have done in most respects all that was possible for them to do in the circumstances in which, by the negligence and the mismanagement of others, they were placed.

The principal agent in destroying the ten thousand while the troops were at Scutari, was the cholera. Typhus, however, and dysentery, also prevailed quite extensively. But since arriving in the Crimea, diarrhoea, dysentery, cholera, and fever have constantly prevailed. A writer states that "dysentery and diarrhoea most of the army suffered from—very few escape one or the other; the latter passes quickly on to the former, which sometimes is very rapid in its course, the patient becoming quite cold, with loss of voice. Nothing seems of any avail, but I think many cases would be saved if they could be removed into houses and *kept warm*. Fever is not so common as may be expected, but when it occurs it generally is of a low type. Of intermittent fever there has been only a casual case. Rheumatism, which all expected a good deal of, is rarely seen in proportion to the other cases. Bronchitis is prevalent, but does not run on to anything worse." The nature of the duties of the soldiers accounts for the vast amount of sickness, this writer believes—being those of pickets lying out over night, covering parties, guards, and of trench labor and exposure, besides fatigues. Most of these are for twenty-four hours at a time, and in all weathers; and when the men in wet weather come home, there is no change for them, since their clothes are worn out. Besides, the tents admit some rain, and a dry tent in wet weather is seldom to be had. The writer, however, is "glad to say that new clothing has arrived, but there is still more at Scutari which cannot be got up for want of means, or *rather will* of the authorities." Each man is now allowed two allowances of rum daily, and while in the trenches three. Potted meats, preserved potatoes, and soups, are also served out. "Of late we must also admit the existence of scurvy in the army to a considerable extent, from living on salt pork,

and indeed eating this raw," as before stated. Another physician adds, that "pneumonia and *autumnal fevers* had carried off many of the troops; also a sort of disease with atrophy and rigidity of the muscular system, with total loss of appetite, want of sleep, and distressing irritability of stomach, to remedy which medicines are prescribed in vain."

The English, however, confessedly, did not know beforehand what diseases they would meet with in the Crimea, as they might have done. The Lancet* remarks that these diseases are unfortunately more of a tropical kind than we had been led to believe. A plague is raging among the Turkish soldiers, which is described as a bad sort of typhoid fever. Diarrhœa of a very malignant kind also, or, as it is called by the French physicians, cholera "without the disposition to cholera," has marked out its victims by hundreds and thousands. The French had published accounts of these diseases, accessible in our medical libraries. We shall learn it *all too late*."

"Several diseases in the Crimea have assumed new shapes, not exactly understood by our younger practitioners, *quite agreeing with some accounts* we had previously learned from *Turkish physicians*. Even in the worst cases of cholera before Sebastopol, there has been an absence of cramps and of the dark leaden aspect of the skin, so characteristic of the disease, and less vomiting. The soldiers, it seems, die in a semi-comatose condition; the latter state, again, sometimes alternating with violent delirium. That which, however, remains unchanged, and marked perhaps to the last, is fatal diarrhœa. Many soldiers died from the diarrhœa even, caused by the change of food to broth and other convalescent articles of diet. Some died in algide cholera; some in a state of torpor; few going through this terrible disease into consecutive fever, as we lately saw so frequently in London. This choleraic tendency has been succeeded by an epidemic form of dysentery. This, however, is very common in armies marching at this period of the year. It is an irritation of the colon and rectum, quite different from cholera, depending on change of food, cold, exposure, and exhaustion. The *French* have been *prepared for all this*." (Feb. No., p. 189.)

* February, 1855, p. 189.

Now, of the above diseases most belong to the preventable class. The *Lancet* states that "nine-tenths of the diseases which desolate our camp are emphatically of this class. Scurvy, diarrhoea, and dysentery, are more easy to prevent than to cure; but the medical department has not had it in its power to do either." (April number, p. 373.) It has been broken down by the imbecility of the departments which controlled it, by the Commander-in-Chief, and the commissariat and other purely military departments at home; as will appear from the facts we are now to detail.

1. In the first place, when the English army left Turkey for the Crimea it was not only without the means of shelter, but the great bulk of the medical stores was left at Varna, and thus all the previous arrangements of the Surgeon-in-Chief, Dr. Andrew Smith, were thwarted by the Commander-in-Chief. Thus it also became necessary to send the sick and wounded from the Crimea to Scutari, fifty to sixty hours sail, where at first was the only hospital.

2. Scutari is on the Bosphorus, opposite to Constantinople, and the location selected for the hospital is said to be low and unhealthy, and surrounded during the summer and autumn by the rankest vegetation. Other hospitals have since been established here, and the English now have eight in all, here and at Balaklava, and one or two other places. It has also been decided to establish a *civil* hospital at Smyrna, on account of the increase of the sick; and the stores for the same have just been sent from London, with the head surgeon, and his lady as matron, at a salary of three hundred pounds a year.

3. But the *internal* arrangements of the English hospitals are still more objectionable. In the first place, the number of surgeons in attendance is too few. There are two hundred and eighty medical men in the hospitals containing the seven thousand patients, while the regimental surgeons attend the one thousand in the field hospitals. Making all fair allowance, "every surgeon has at least an average of forty patients. In the civil hospitals of London the proportion of medical officers to patients is about one to ten.* But in military hospitals,

* *Lancet*, February, p. 184.

moreover, more constant attention is required by the patients, from the greater severity and acuteness of the cases ; and when we add to this, the fact that some of the medical officers are themselves constantly on the sick list, and several have died of cholera and fever, it becomes apparent that they, as well as the soldiers, are constantly over-worked, and must find it impossible to afford the sick the best assistance. Direct testimony is indeed received of the insufficient attendance upon the sick and wounded, from all quarters. There *should* be not only “a sufficient medical force for all ordinary circumstances, but also a *reserve* for emergencies.”

4. But, again, the *assistants* of the medical officers in the hospitals are utterly incompetent and unreliable. “The hospital sergeant of the English army is raised from the ranks, he may go to any other grade, of schoolmaster or color-sergeant, at any moment, so that the regimental surgeon perhaps loses him when half trained, and is thus exposed to a succession of most incompetent helpers. He is also paid less than the color-sergeant, and therefore has no inducements to remain. Hence, the surgeons have sometimes actually been obliged to perform operations, assisted only by their solitary stable servant, or a common soldier.”*

All the immediate care of the sick and wounded in the French military hospitals is entrusted to a class of young men called *infirmiers*. Of these there are several classes, as the first and second class ordinary attendants, the head attendants, corporals, and sergeants. They wear a distinct uniform, and must know how to read and write. The *infirmier* is a reliable assistant, trained to manage ambulances, to carry the sick and wounded from the field of battle, and to assist in operations. They superintend the landing of all the hospital stores of the French in the Crimea, and are quite *au fait* in advising with the sick soldiers, in applying the tourniquet and bandages. A writer admiring this feature of the French system says : “The *infirmier* handed the French surgeon the particular knife he needed ; the plaster was warmed by a vessel of hot

* Band boys and drummers, it seems, were taught how to apply the tourniquet, and we hear of one of these fellows applying it, in case of a comrade who had been wounded in the carotid artery, *around the soldier's neck*.

water; the wounded man, after operation, was as carefully placed on a bed in the ambulance, as if in Paris, and an inferior officer led away the ambulance."

Now, instead of such trained assistants and ward attendants as these, the English have employed the convalescent soldiers as hospital orderlies, and the nurses of the sick. They also gave up the management of the ambulances to some *Greenwich* pensioners, exported for that purpose to the Crimea. How these latter worthies have performed the duties assigned them, may be gathered from the following not very complimentary account of their character and conduct in a letter dated December 10th. "Our ambulance corps is *hors du combat*—in fact a failure. Most of the pensioners are either dead or ill; they are estimated as the greatest blackguards in the British army. At Varna they are always drunk, and now, when wanted, are nearly all laid up. Their mules and horses have suffered the same fate, so that the wagons are useless for these reasons. Good conveyances are stopped for want of proper drivers." And, in fact, the French lent the English two hundred mules with drivers, to assist in carrying their sick to Balaklava!* After the battle of the Alma, the pensioners, the mules, and

* "The *mule ambulance* of the French army is an iron frame attached to one of these animals, which can be used either as a single seat, or unfolded into a bed for two. It has the advantage that the mule can be galloped to the most inaccessible places, and walked back with the wounded. Neither the carriage ambulance, nor the English ambulance with ten mules attached, can reach the trenches or the fortifications."

The following is a scene attending the removal of the sick by means of these ambulances.

"A large number of sick, and I fear dying men, were sent into Balaklava to-day on French mule litters, and a few of our bat horses. They formed one of the most ghastly processions that ever poet imagined. Many of these men were all but dead. With closed eyes, open mouths, and ghastly attenuated faces, they were borne along two and two, the thin stream of breath visible in the frosty air, alone showing they were still alive.

"One figure was a horror—a corpse, stone dead, strapped upright in his seat, legs hanging stiffly down, the eyes staring wide open, the teeth set on the protruding tongue, the head and body nodding with frightful mockery of life at each stride of the mule over the broken road. No doubt the man had died on his way down to the harbor. As the apparition passed, the only remarks the soldiers made were such as this—'There's one poor fellow out of pain anyway!' Another man I saw with the raw flesh and skin hanging from his fingers, the naked bones of which protruded into the cold air, undressed and uncovered. This was a case of frost-bite, I presume. Possibly the hand had been dressed, but the bandages might have dropped off. All the sick in the mule litters seemed alike on the verge of the grave."

the ambulances were "nowhere." They are said to have been "as fabulous as the horses of the Sun, or the cock of Æsculapius." And had not five hundred seamen come to the rescue with oars and hammocks, the wounded must have lain on the beach.

The poor inmates of the hospital at Scutari were, however, cheered by the arrival, early in November, of Miss Nightingale, with thirty-seven other female nurses. There were then at least 2,000 wounded—some accounts say 3,000—in the hospitals. And since then, females intending to join Miss N. have been in attendance at the London hospitals, "learning bandaging in the wards, and attending operations, to accustom themselves to the sight of blood." Two ladies "of quiet and elegant deportment" were attending Mr. Fergusson's operations the 1st of March, "preparatory to assisting Miss N., who had been attacked with fever."*

The sick have, therefore, doubtless been better nursed since, than previously to, December. But another important improvement is, the sending out of medical students, of experience, as good dressers. Thirty-two have been sent out, chiefly from Guy's, St. Thomas', and Bartholomew's Hospitals. They receive 6s. 6d., (about \$1.50) per day; and for the present temporary service are to rank as assistant surgeons.

5. But there was a still farther impediment to the labors of the hospital physicians and surgeons. There was no well-arranged plan and *organization* of the medical staff and their assistants of all grades; and, therefore, no unity of action. While after the battle of Balaklava, (Oct. 25th,) between 1,200 and 1,500 wounded arrived at the French hospital at Pera in a single day, and "all were operated on and cared for as required, with promptness and the most perfect order; at Scutari at this time, all was confusion and want of organization;" and a third of the English wounded were carried elsewhere. A writer remarks that "the hospitals are but roofed battle fields; the fight for life, in the confusion of the hospitals

* As an *extra* entertainment, we suppose, to this class of amateurs, he had previously performed the operation of lithotomy--on a boy--in their presence. At least, we perceive no special fitness in this operation in the way of qualifying them for their proposed duties at Scutari.

at Scutari, is worse than death on the field! Officers and men all alike, sick, weakly, worn out, dead and dying." Another speaks of the 8,000 in hospitals, as men whose lives are even in greater peril from the want of an efficient organization of the means of restoring health, than from the injuries or the diseases which have laid them low."

The report, however, that soldiers had been embarked for Scutari after the battle of the Alma, before their wounds were dressed, has been denied; and the horrid story of the *Kangaroo*, with maggots in the wounds of those on board, is in itself improbable. Maggots could hardly be developed during the passage from Balaklava at that season of the year. But to balance this denial of neglect in a preceding instance, it was asserted by a senior officer on the *Colombo*, that there were 600 wounded on board, and during the whole passage of sixty hours to Scutari, (including the time they were on board before starting,) "the three surgeons never ceased their amputations, assisted by volunteers from the crew of the ships; that the decks were running with blood the whole time, worse than shambles, and the exhalations were overpowering in the extreme."

After the battle of Inkermann, however, a better organization was apparent. Though it lasted till evening, the wounded had had their wounds dressed by "eight o'clock, and were lying on comfortable beds of hay. Volunteers arrived in numbers to attend the suffering." The number of wounded in the battle was about 2,087, and the killed 696. The former were mostly carried to Scutari; there being already 1,716 sick and wounded in the large hospital, and 600 in the smaller.

But to thousands all these improvements came too late. By a letter dated several weeks later (Jan. 27th), we learn that—

"Still sickness clings to our troops, and the poor worn-out soldiers who climbed the bloody steeps of the Alma in the splendor of manly strength, and who, full of the noblest courage and devotion, defended in broken file the heights over the Tchernaya against the swarming multitudes of the Muscovite, weak, exhausted, and "washed out" by constant fatigue, incessant wet, insufficient food, want of clothing and of cover from

the weather, now die away in their tents, night after night. Many of the men are too far gone to recover.

“Doctors and hospitals and nurses are now too late, and they sink to rest uncomplainingly, and every week some freshly formed lines of narrow mounds indicate the formation of a new burial place.

“The fact appears to be that our troops are overworked in the trenches, in the field, in camp, and on the roads. Every one knows that if a horse is reduced by too much labor to a certain point he cannot be saved, even if he be put into the best stable and attended by the best grooms in England. Whole regiments have vanished as if by magic. In some cases the men have not fallen in action, nor have they been exposed to the labors of the army beginning the campaign. No wonder, then, that the old soldiers of the Crimea, the men of Alma, Inkermann, and Balaklava, should go at last, and share the fate of the raw levies, and of the unacclimatized regiments.

“The wretched boys sent out to us, are now not even fit food for powder. They die away ere a shot is fired against them.”

6. Another absolutely inexcusable obstacle to the efficiency of the medical staff, has been the neglect, on the part of the authorities entrusted with that duty, to supply the hospitals with medicines and proper articles of diet for the sick. An absurd number of tourniquets and wooden legs,* and immense quantities of lint, had been furnished. But at a time when dysentery and cholera were raging, and 168 died in five days from dysentery and diarrhœa alone, (Jan. 10th to 15th)—quinine, brandy and opium “*could not be had*,” though Turkey, the land of opium, is within two days’ sail! There was also a want of castor oil and of turpentine. Scurvy had appeared from the use of salt rations: but there was no remedy to arrest it. Meantime, a large lot of *balsam copaiba* had been sent—*by mistake*!

The consequence of this state of things, so far as the results of medical and surgical treatment of those in the

* An immense outfit of wooden legs also accompanied the naval expedition to the Baltic. We are, however, consoled for the wear and tear these must have suffered to no purpose by the reflection that they were the *only kind of legs* to which that expedition caused any detriment.

hospitals and the camp is concerned, may easily be foretold. As an illustration, "twenty-two out of thirty on whom amputations had been performed by one of the surgeons at Scutari, had died from the want of medical comforts and wine alone." In one night, also, eighty-five died in the camp of cholera and dysentery. Neither science or skill, or the incessant labors of the medical staff, can avail, if the simple but indispensable remedies, before mentioned, are forgotten.—*Lancet*, p. 286.

By the end of January, however, we learn that "tea, arrow-root, sago, ground rice, and Beeckley's cocoa and milk had arrived for the use of the sick." As marks of sympathy felt at home for the soldiers in their privations, we can also record the fact that the sheriffs of London sent a pipe of Port wine to the sick and wounded at Scutari; and since then, the merchants of Oporto have sent out, as a present, three hundred and eighty-four dozens of the same article. Several individuals have volunteered to collect and send out porter, lint, sheetings, books, &c. Several tons of lint have thus been sent out, in addition to the quantity already mentioned; and we learn that a certain nobleman has been devoting his energies for several weeks past to *scraping* this article.

7. But lest we weary our readers, we will specify but a single additional obstacle to the efforts of the medical staff—the most annoying and disgusting of all the trials they have had to encounter—I allude to the *refusal* on the part of agents *to afford the means of comfort and recovery to the suffering soldiers*, when already on the ground and in their possession. Indeed, it appears as if the whole train of officials, from the highest to the lowest, had become alike completely stultified; and thus the poor soldiers were, in very many instances, left to die in the midst of abundance, in spite of all the efforts of their medical attendants to the contrary. A specimen of this infatuation—"one of a thousand," says an English paper—will be given:

"A circumstance occurred in Balaklava to-day (25th January), which I will state, for the calm consideration of the public at home, without one single word of comment. The Charity, an iron screw steamer, is at present in harbor for the reception of sick British soldiers, who are under the charge of a British

officer. That officer went on board to-day, and made an application to the officer in charge of the Government stoves for two or three to put on board ship to warm the men. 'Three of my men,' he said, 'died last night from choleraic symptoms, brought on in the present state from the extreme cold of the ship; and I fear more will follow them from the same cause.' 'Oh!' said the guardian of the stoves, 'you must make your requisition in due form; send it up to head-quarters, and get it signed properly, and returned, and then I will let you have the stoves.' 'But my men may die meantime.' 'I can't help that; I must have the requisition.' 'It is my firm belief that there are men now in a dangerous state, whom another night will certainly kill.' 'I really can do nothing; I must have a requisition, properly signed, before I can give one of these stoves.' 'For God's sake, then, lend me some; I'll be responsible for their safety.' 'I really can do nothing of the kind.' 'But consider, this requisition will take time to be filled up and signed, and meantime these poor fellows will go.' 'I cannot help that.' 'I'll be responsible for anything you do.' 'Oh, no, that can't be done!' 'Will a requisition signed by the P. M. O. of this place be of any use?' 'No.' 'Will it answer if he takes on himself the responsibility?' 'Certainly not.' The surgeon went off in sorrow and disgust. Such are the 'rules' of the service in the hands of incapable and callous men."

Another example of the disgusting formality with which the physicians have had to contend must suffice. "A sick officer was recommended, as his only chance, to leave the camp. Before this could be permitted, it was necessary for him, although his life hung upon the passing moment, to procure the signature of *five different officials*. It so happened that this consumed five days; and when the indispensable signatures were obtained, the document that was to be his saving passport, was lost! Another five days' delay, expended in the same routine, had not expired before the wretched man died.—*Lancet*, April, p. 373.*

* The following facts are received as this article goes to press. The mortality at Scutari and Kululee, during the last week in February, remained at the average of the preceding fortnight; the burials at Scutari being 32, 30, 31, and 37 on the 22d to the 25th, inclusive. At Kululee, the burials on the first three of

But let us now turn our attention more exclusively to the *Surgery* of the English army in the Crimea, and its results, so far as we have been able to glean them from the sources accessible to us.

In the battle of the Alma, the wounds were inflicted principally by cannon balls and bullets—a great proportion being caused by round shot, and therefore being of the most horrid description. At Inkermann, they were, in great proportion, “clean cuts,” being mainly bayonet wounds. At Balaklava, very many of the wounds were made by round shot and the Miniè rifle. One-seventh of all the wounded carried to the French hospital at Pera, were wounded by cannon shot. These facts may be borne in mind, in estimating the results of operations after these battles, should any more extended statistics be hereafter furnished. About three hundred Russians, wounded in the last mentioned battle, by the Miniè rifles of the French, called for some formidable operations, the balls having split the bones.*

these days were 13, 10 and 12. Three weeks since, the average daily mortality in both these hospitals was 70. The sickness was also diminishing in the English camp, and the sick were to be transported fortnightly to England to recruit. An additional force of surgeons had also been sent out.

A physician, writing on the 14th of February, speaks of having come down from the camp to Scutari on a ship having sick and wounded on board; and says that one can have “no conception of the horrors of a ship full of such cases. They were mostly fever, dysentery and cholera. At this time there were 12,334 patients at Scutari, and 5,773 in the camp hospitals.

A very bad form of fever has broken out at Scutari since the first of March, “the product of animal emanations from the accumulated mass of putrid materials collected in the neighborhood.” Seven medical men have been destroyed by it. Some term it typhoid; others fear it is the plague. Medicines were being promptly supplied. The Russians were *said* to have 35,000 in hospital. Sardinia has a hospital at Pera with 2,000 beds.

* The Minie rifle owes its peculiarity to the *ball* it carries, which was invented by Major Minie, of the French army. It is oblong, with a conical point, (or very like an acorn in shape,) and having a conical cavity in its large extremity, extending from one to two-thirds of its length. A cup made of sheet iron is fitted into the orifice of this cavity, and on firing, is driven by the powder into the ball; the latter being thus spread open, and *slugged*, or made perfectly to fit the spirally grooved rifle barrel. Thus a rotary motion and a certainty of direction is given to the ball; and at the same time less powder is needed, as the windage is prevented, and less time is required to load the rifle, since the powder itself slugs the ball, and no ramming is necessary. The conical shape of the ball

At the battle of Inkermann, the killed and wounded amounted to two thousand seven hundred and eighty-three. Allowing three wounded to one killed, as is usual, there were two thousand and eighty-seven wounded and six hundred and ninety-six killed. Of the Russians, it is said three thousand were killed! A writer remarks that "the wounded Russians gave ample scope for operations—but the poor fellows were treated kindly, and none operated on for the sake of operating." [We trust not.] "Where a doubtful case came before the surgeons, all points were duly considered as in hospital practice. The Miniè ball made a very bad wound, and coming in contact with bone comminuted it a good deal." Five amputations of the hip were performed, "most if not all the patients surviving not many hours." But no accurate account of the operations generally could be given, since the patients operated upon were at once sent on board ship for Scutari.

As instances of providential escapes in this battle, a mounted officer owed his life to a prayer-book in his holster, which turned the direction of a ball; and a private of the Grenadier Guards had one side of his moustache burnt and cut away by a ball, which struck his breastplate and glided off to his upper lip.

Some *data* in regard to the operations at the Hospital at Therapia have been received. About seventy were received here "of those most seriously wounded by shot and shell, consisting of frightful lacerations of limbs, severe fractures, &c., requiring amputation. Of seventeen primary amputations, including two severe operations on the thigh, only three had died; whilst, of twelve secondary amputations, five had died,

renders it heavier than a spherical one; and offering a less resistance to the air, increases its velocity and the distance to which it can be thrown. It therefore often passes through the bones, splitting them in its course, instead of glancing off from them, as is common with the ordinary bullet.

Some of the reports of the execution of the French riflemen upon the Russian gunners at their embrasures, in Sebastopol, may seem to the uninitiated quite fabulous. But a correspondent of the New York Tribune states that Major Miniè himself, while experimenting in Paris, a few months since, planted three balls in succession in a target of the size of a man's hat, at the distance of *three-fourths of a mile!!* He remarked at the time, that he could do this all day long, and teach any other man to do it.

and the others had all but died, from gangrene and purulent absorption. One Russian had his hip-joint taken out, and recovered. The primary cases were thus by far the most favorable, even though four of the seventeen cases had been complicated with compound fractures of other limbs besides those operated on." "The Russians bear all sorts of operations best. They are well fed, and free from scrofula; our men are often tuberculous, scrofulous, or what is now equally bad, dysenteric or scorbutic."

It appears that at Scutari the effects of scurvy upon the wounded were but too apparent, having made "many of the wounds impossible to heal, and rendered fractures from shot and splinters quite unmanageable." It is also reported that some navy surgeons, who went on shore, "pointed out all the worst cases among the soldiers as suffering from *scurvy*, a disease not known or suspected by the younger military surgeons." We have already remarked the death of twenty-two patients out of thirty, who had had amputations performed by one of the surgeons at Scutari.

In regard to the results of operations at Scutari, we have in addition only the general assertion that "the mortality is less than one-half." But we do not believe that the medical profession will ever know anything definite and valuable on this subject, since no registration of the causes of death has been kept, and in regard to thirty thousand at least of the dead, it is now too late to begin.

The advantage of primary over secondary amputations has, however, been again demonstrated, though Guthrie and Larrey conclusively settled the question forty years ago. We confess our astonishment, indeed, that the military surgeons of any country, at the present day, should adopt the practice of secondary amputations, when they can be avoided. It was all very well for Dionis to tell Louis XIV. that the limbs of the wounded were in greater jeopardy from primary amputations, and young surgeons, than from the bullets of the army; for this was about a hundred and fifty years ago. Old Bilguer, a great military surgeon of his time, under Frederic the Great issued an order against amputating at all.* But *secondary am-*

* He also took this ground in his thesis for graduation at Halle, in 1761.

putations only were performed in his day ; besides no flaps were formed, and the stumps were seared with the actual cautery, and then left to heal by granulation. *He* had some reason for the remark, "to cut off a limb after a bad wound, what is it but to *add wound* to wound?" Therefore, he did "not allow a single one of six thousand wounded Prussians to have a limb amputated ; and, consequently, one half of them died at once on the field, and the rest remained cripples for life, except that, as a splendid triumph, he could give eleven out of the six thousand cured by nature." But all this, also, was nearly a century ago.

But that at the present day, with the best English authorities maintaining the advantage of *primary* operations, English surgeons are performing *secondary* operations, seems indeed a marvel, and a long step backwards. Guthrie saved eleven cases of amputation at the shoulder joint, out of fourteen, by the primary operation ; and Larrey operated successfully on the battle-field in ninety cases out of somewhat more than a hundred. (Memoirs of Military Surgery.)

Contrast with this the ideas and the practice of the French surgeons in the Crimea, which, with the amount of labor demanded of a single surgeon in an emergency, we learn from the following extract :—"From four in the morning till eleven at night, we tried to get through our primary operations. Of three hundred sent here * one day, *I had to amputate* one hundred and thirty-five. We have had every kind of wound, from simple bayonet wound to complete destruction of limbs by grape and cannon shot. We have avoided pyæmia by the cleanliness of the apartments, and more than anything by *avoiding secondary amputation*. Operate early, and feed your patients, if you wish to save life ; operate late, and starve them, if you wish for suppuration, unhealed stumps, pyæmia, dysentery, or death."

The following extracts, also, from a letter of Dr. Michael Levy, chief physician of the French army in the Crimea, dated Oct. 27, (ten days after the firing on Sebastopol commenced, and two days after the battle of Balaklava,) will show the con-

* The French Hospital at Batgtshe Serai.

trast between the French and the English troops at that time : "There are at present one thousand and eight sick in the ambulances, one hundred and thirty-seven only of these being wounded. Thus the duties of the *medical department* are more arduous under the fire of the batteries of Sebastopol than those of the *surgical department*. Only one-third of the sick are seriously ill, the other two thirds being debilitated, but sure of recovery. The General-in-Chief* has ordered measures necessary to improve the position of our sick. Our wounded, and those who have undergone operations, continue to furnish a remarkable number of cures. No army ever received medical and surgical assistance more prompt, more methodical, more complete, or more assiduous. Under the walls of Sebastopol, and at Constantinople, we have a number of talented practitioners vieing with each other in skill for the benefit of our sick and wounded. The ambulances† installed on the table-land above Sebastopol, amid the roaring of the artillery, exhibit by their regularity and excellent organization, the best specimens of those temporary establishments. Not a single case of cholera or lock-jaw had occurred of late among the wounded. The internal diseases are chiefly diarrhœa, dysentery devoid of intensity, light intermitting fevers, and gastric fevers, some of which are accompanied by cerebral congestion. The cold of the nights had produced a few cases of bronchitis. The army is completely free from scorbutus ; and the daily distribution of fresh bread, and the very frequent distribution of fresh meat, preclude the possibility of its manifestation. The *morale* of the army is a protection against it."

* He is elsewhere said to be constantly among the soldiers in the trenches, and seeing after their wants.

It was stated early in the campaign that the English officers thought the French were much wanting in dignity and self-respect, they were so much with the soldiers, while the French officers regarded the English as haughty and overbearing. It was remarked that Lord Raglan had never been *seen* by the greater part of the English army, but was living in a very quiet and retired manner, in very comfortable quarters, at a dignified distance from the camp. It is for the *people* of England now to decide which quality in superior officers is most desirable—aristocratic superciliousness or French condescension and sympathy for the common soldier.

† He speaks of others in the trenches also.

But we will not farther multiply illustrations of the fact that in all that pertains to military medicine and surgery, the English army has been both absolutely and comparatively wofully deficient. It is now time to inquire why all this has occurred in case of a civilized nation, and in the nineteenth century.

And, in the first place, we must record the fact that, with the exception of a single instance, no encouragement to the medical staff has been given by any public recognition of the importance and value of their services on the part of those high in command ; and the commander-in-chief could not have avoided such a recognition on the occasion alluded to. The fact was notorious that Assistant-Surgeon Wilson, of the Seventh Hussars, during the battle of Inkermann, seeing the Duke of Cambridge in imminent peril, as half a dozen Russians were aiming at him, rallied a few men and dashed at the Russians, and saved the Duke. The Duke called him forward and thanked him in presence of the army. Lord Raglan afterwards stated, that the Duke had spoken to him "in the highest terms of the spirited exertions of Assistant-Surgeon Wilson, &c.," and then adds, "it is due to the principal medical officers of the several divisions, Drs. Alexander, Cruickshank, Forest, Linton, and Humphrey, to report that their able exertions have been strongly represented to me, and deserve to be most honorably mentioned, and the arrangements of the Inspector-General of Hospitals, Dr. Hall, for the care of the wounded, merit the expression of my entire approbation."*

The fact is, the army surgeon often exposes his own life as much as the soldier does. He is "in constant contact with those whose avocation it is to encounter danger ;" and he becomes, so far as risking his life is concerned, a soldier too. He is therefore entitled to the sympathy and the honorable mention of those in command. Surgeons are present in the trenches to attend the men who may be shot down there. The amputations were performed during the battle of Inkermann in full view of it. Dr. Levy remarks in his report, that he "often as possible

* It is also a fact worthy of record here that the first person who discovered the approach of the Russians, and gave the alarm on the morning of that battle, was Dr. Smith, a hospital surgeon ; he having rode out in the gray dawn to attend to his hospital duties.

visits the ambulance in the trenches, it being placed under the care of the different surgeons of the army ambulances, who relieve each other daily. This service, which is not without danger, is a post of honor, and a practical school of military surgery." The value of the services of such men may be understood from the assertion of Napoleon the First, that Larrey saved the lives of five of his generals, without whom he could do nothing, by being himself thus exposed, and present to render assistance, during different battles.

In addition to the allusion of Lord Raglan, before mentioned, we are not aware of any recognition of the services of the army surgeons in the Crimea, from any high source, unless we are to regard the fact as a sort of sugar-plum compliment, that a new dress for the surgical staff has been decided on.*

But the French surgeons have *already* (and two months ago) *got decorations* for their services at the battle of Inkermann!

But this neglect of the medical and surgical staff is not merely incidental at the present time. It is a natural result. For it is well known that in England medical men are derived almost entirely from the middle class of society, while the best military offices, being obtained most frequently by purchase, are held by the aristocracy. Hence there is very little sympathy between them and the latter; and they are regarded in the light of subalterns by the military staff. Hence, also, the assistant surgeons of the English navy are placed among the midshipmen, and without any separate cabin for study or reflection, an abuse which has existed time immemorial, in spite of reiterated addresses and petitions on this subject to those in power.

The consequence of this state of things is bad in two respects. One result has already been specified, viz.: the medical and surgical staff can expect no generous testimony to their services from high quarters, to excite their emulation and

* This dress consists of a tunic or frock, with a slight display of gold lace. The facings and cuffs are covered with black velvet, turned up with lace. The dress trousers are black, with a stripe of gold cord; the undress of the same color, but with a small scarlet-cloth stripe. The cocked hat is retained, with a small green plume, &c.

enthusiasm. But still worse for the service, the best minds will not, we must believe, submit to these humiliating conditions and relations, except in very rare instances, and therefore there will be a deficiency either in numbers or in talents.

And what is the fact in regard to the English *navy*? "It is notorious," says the London *Lancet*, "that our fleets have gone out with a complement of medical officers totally inadequate even to the emergencies to which they have hitherto been exposed, and that great dissatisfaction has existed among them respecting the treatment to which they have been subjected by the officers in command.* (*Lancet*, Feb., p. 83.)

These results are produced in a less degree in the army, so far as medical men and common soldiers are not crowded into the same tents; but that they must be the same in kind no one can fail to perceive. We have no reason to doubt the ability of the British army surgeons (and physicians) in the Crimea, upon direct testimony;† but if a body of really skilful men *can* be brought together in such circumstances, it is a wonder indeed. Sir James Macgregor once told Parliament he "could furnish a regiment of surgeons at twenty-four hours notice." If this were intended as a true statement, we need no farther proof of the low standard of requirements, as to skill, in the surgical staff of the British army; nor are we surprised that the lessons taught by Guthrie and a few others, who have made themselves great in spite of all obstacles, have been so far ignored during the present war. We doubt not, however, there are minds which, during the present campaign—as did the surgeon we have just mentioned in the Peninsular war—will show themselves superior to circumstances, and demon-

* The following extract from a speech in the Town Hall, in Birmingham, England, by a Mr. Dawson, expresses the true state of things:—"He would put it to them of men lying for hours after battle, uncared for, unattended, stiffening slowly into death. 'Oh!' said the aristocracy, 'that was the *medical* department; it was their fault; *we* have nothing to do with it.' We said, 'No.' (Cheers.) We asked who put the surgeons down, snubbed them, gave them the cold shoulder? Why don't surgeons go into the navy? Why if they are not of the proper blood, clique, class, or order, they are snubbed, put down at once, sent to mess with some fresh midshipmen. Now we demand that the whole system of England should be altered." (Cheers.) *Lancet*, April, p. 384.

† The *Lancet*, however, admits a "deficient state of general medical education." *April No*, p. 377.

strate their skill in spite of all the indifference and neglect, or even contumely, they may experience. We confidently expect to hear the names of such in due time ; and when we do, may we be spared the pain and the mortification of also learning that the government has been higgling with them also, on the question whether for their services they shall receive *half pay* or *whole pay* !!

How different in these respects the condition of the French army surgeons. The surgeon-in-chief is, in the first place, selected from those not surpassed in experience and skill by any in the kingdom. This has been the fact from the time of Parè to the present day. When Potempkin, the favorite of Catharine of Russia, asked France for a surgeon-in-chief, Louis offered Percy, the greatest surgeon of the Continent, at that time. Percy, however, preferred to remain in France in an inferior position.

But, again, the surgeon-in-chief in the French army is on cordial terms with the general-in-chief, and treated as an equal. The friendship of Napoleon the Great for LARREY is well known ; and he remarked of the latter, that he never knew a more virtuous or a more valuable officer. Napoleon erected a statue to Larrey, still to be seen at Val de Grace, in Paris. He made him baron on the field of Wagram ; and at Eylau he gave him the cross of the Legion of Honor. And Larrey's name is on the Arc de Triomphe at Paris. There is also in France a monument to Ambrose Parè.*

GUTHRIE, who sustained the relation to England which Larrey did to France, was kept in doubt whether he should receive *whole pay* for his services !!

There is, therefore, a *radical* defect—the *system itself* is defective. And until the present system of appointments to offices in the army is changed, and a different *status* is given to medical men, we see no reason to believe that British military medicine and surgery will be what it should be. So long as the supervision of all the affairs of an army is committed to a few individuals of that class, who cannot be intimately ac-

* The motto upon it is his celebrated remark in regard to his treatment of wounds without the application of the actual cautery, which had been used up to that time—"JE LES PANSAY ET DIEU LES GUARIT."

quainted with the details of business, from the very nature of things,* and whose qualifications must be intuitive, if they exist at all—so long the medical and surgical staff will be treated with indifference, if not with neglect and contempt, and so long—though never again, we trust, to such an extent as of late—will English military hygiene, and medicine and surgery, suffer in comparison with what the light of the present age demands.

It is not for us to decide whether this system can or will be changed. There are, however, certain sources of improvement which we trust might be adopted at any rate, and one great fact on which they are founded we venture to repeat again, viz.:—

The medical is of vastly greater importance than the *surgical* staff of any army, though, of course, the latter is also indispensable. The French understand this fact perfectly ; the English nation has yet to learn it. French medical students study military surgery in connection with medicine, in the medical schools, from the outset. All the arrangements in the medical and surgical departments of the French army are also made in accordance with the fact just stated. Every preparation is made for the prevention and cure of disease, while nothing is omitted which wounds and other injuries may require. Nor are wounded soldiers, previously prostrated by incessant hardships, starved from a fear of inflammation ; nor the fact

* Mr. McDonald, the almoner of the fund [of over £10,000] sent by the London Times to the sick in the hospitals, says all the disasters in the camp, and in the hospitals, were caused by these three persons, "*Lerd Raglan*, in the Crimea, who overworked his troops in order to have an equal share of the actual siege operations with the French, who had three times as great a force ; *Dr. Andrew Smith*, at London, the Director-General of all the army hospitals, whose stringent rule and red-tapist routine has destroyed all zeal and independence of spirit in the most of his subordinates ; and *Lord Stratford de Redcliffe*, at Constantinople, who thought it *infra. dig.* to look after the sick and wounded, and left the confusion in *statu quo*, though the hospitals are within sight of his splendid palace. High rank is no longer a shield before the tribunal of public opinion."

Dr. A. Smith is, however, one of the most anxious for the appointment of a committee of inquiry ; and we trust it will be found that he has done all that is possible under the miserable system, and against the obstacles in the Commissariat Department, which have controlled him.

forgotten, that pyæmia is very sure to follow secondary amputations.

The English medical student is to be a physician, or a mere surgeon, from the commencement ; and if the latter, inflammation is the bugbear he is taught to dread after operations, and to avert by inanition. It seems also to be the English idea that though medicine is very well elsewhere, it is *surgery* that is needed on board a fleet, or in an army, and this alone, almost. So instead of medicines enough, and of the proper kinds, to treat the *diseases* which must necessarily arise during a campaign, thousands of tourniquets, and cargoes of wooden legs, and tons of lint are sent to the army!!! Indeed so far has this false idea of the *exclusive* value of surgery been carried, that it has been gravely recommended that every soldier should have adhesive plaster and a few other things—in fact a *miniature surgery*—sewed up in some part of his dress for his own private use!!

Meantime, of the thirty-two thousand soldiers who have perished, about twenty-eight thousand, as we have seen, did not require the aid of *surgery* at all.

We also think it a very just remark, that the French surgeons “look at the worst of everything with a keen philosophic eye,” while the English “slur over the danger, and look at everything *couleur de rose*, satisfied with the surgery of the year 1811.” *

But another thing necessary for the advancement of British military medicine and surgery, is, an accurate *appreciation on the part of Government, of the true value to an army of skilful medical and surgical services*. When this is understood as Napoleon I. understood it, and as the French government has understood it for more than a century past, the most talented men will volunteer to perform the responsible duties of the army physician and surgeon ; the medical and surgical staff will then be treated with deference by military officers of all grades, and be encouraged in their arduous and dangerous duties by a stimulus superior to all others to noble minds—by the consciousness that their labors will be appreciated. Then a baronetcy conferred

* Lancet, March, p. 286.

on a military physician or surgeon may no longer be a thing unheard of in England; and even a statue of some future Guthrie may somewhere exist to mark a nation's gratitude.

Never has a government had such an opportunity to learn the true value to an army of military hygiene, and of medical and surgical skill, as has been afforded by the contrast in the French and English armies in the Crimea. Will England *apply* the lesson it has taught her? enforced as it is by the sacrifice, within so short a time, of *twenty thousand of her heroes!*

On Tuberculous Peritonitis in Adults. By DR. AUGUSTUS KYBURZ, of Zürich. With Observations by H. N. BENNETT, M.D. Bridgeport, Conn.

In bestowing especial attention upon this disease, hitherto little regarded, the author thinks to fill up a void in special pathology. His deductions are based upon five cases observed by himself; a sixth, furnished by Prof. Lebert, is also a source of reference.

From the consideration of the diagnostic signs of these cases, we see how uncommonly difficult it is to recognize this form of disease at its commencement. The disease begins, according to the author's observations, generally with a chill, which is then sooner or later followed by the abdominal symptoms. When the disease is in its early stage, and the deposition of tubercle consists in scattered granulations upon different parts of the peritoneum, and latter occupies the superior regions of the abdomen, the belly is puffed up and of a roundish form. If the tuberculosis is propagated from one point (in four cases it was the ileo-cæcal region), the abdomen becomes irregularly distended, and has a doughy and resistant feel. If particular parts are especially involved, various intumescences can be felt, which may readily be confounded with lesions of the spleen, liver, and uterus. In connection with this deposition and progressive development of the disease upon the peritoneum, the most various and opposite symptoms are called forth, to wit, tension of the abdominal walls, prominence of the liver and spleen, so also of the heart, compression of the lungs and dyspnœa; the organs

also become pressed downward into the cavities in which they most readily subside ; thus the author found in one case the vaginal portion of the uterus crowded down even to the labia. Through the pressure of tubercular degenerated lymphatic glands upon the excretory ducts of the liver, or through pressure of the peritoneal sheets one against the other, since they include the gall-ducts between them, arises the icteric appearance and the accompanying coloration of the stools. Disturbance of the urinary secretion from pressure, is not a rare phenomenon. In one case ischias originated from pressure upon the nerves. Pressure upon the vessels naturally produces disturbance of the circulation, thence œdema of the feet. If the vena cava becomes compressed, the veins appear swollen upon the distended abdominal walls. In one case coagula had been formed in the veins. The phenomena of vomiting, diarrhœa, or constipation, and loss of appetite, are results of the disturbed action of the organs, partly from pressure, partly from morbid degeneration of the intestinal walls.

In reference to the general symptoms, we can, according to the author, determine the following rules. There is usually a slight febrile condition existing, the pulse even in the morning being over 90 per minute, very often accompanied with colliquative sweats. We observe in the patient a progressive emaciation and loss of strength, as well as an alteration of the color of the face, but rather paleness with circumscribed redness of the cheeks, than the straw-yellow color peculiar to carcinomatous affections.

The shortest duration of the disease was four weeks, the longest six to seven months. The issue in five cases was fatal ; only a single patient left the hospital in a satisfactory condition, and the author doubts whether he was really cured. Death followed from gradual wasting, or from the occurrence of various complications. Ulcerations of the intestine were observed only in one case, perforation in none.

The treatment was the same as in every other form of tuberculosis, the administration of cod-liver oil a long time continued. —*Schmidt's Jahrbücher.*

[It is unquestionably true that tuberculosis occasionally

selects the peritoneum as its chosen seat, and spends its force principally upon this membrane, but it is doubtful whether it is ever the sole seat of the tubercular deposit. I have seen two strongly marked cases of tuberculosis of the peritoneum, one of which I was able to diagnose *ante mortem*. The latter case occurred in a young girl fourteen years of age, who had never menstruated. She was of delicate organization and inherited the scrofulous diathesis. At the commencement of her thirteenth year, the abdomen began to enlarge, especially in the hypogastric region, and at length assumed a very symmetrical oval form. The physician who first attended her, inclined to the opinion that this appearance of the abdomen was attributable to the distention of the uterus with the menstrual fluid, and that this was the sole cause of her indisposition; she was anæmic, with a frequent small pulse, a short dry cough, occasional diarrhœa, and great prostration of strength. She also had once or twice, slight hæmorrhage from the lungs. I saw her for the first time, a few days previous to her death. Her abdomen at this time presented the form I have indicated above, that of a very perfect oval; it was doughy to the feel, without any perceptible fluctuation. The emaciation of the limbs was not as great as in many cases of pulmonary phthisis. The history of the case, the form and feel of the abdomen, &c., determined my diagnosis, which was made the more readily as I had at that time just read the article on local tuberculizations in the great work of Rilliet and Barthez.

The *post-mortem* revealed a remarkable tubercular deposit upon the various portions of the peritoneum, the two sheets of which (parietal and visceral) had formed numerous adhesions, and the intestines were literally glued together by the pseudo-membranous formations at numerous points. The tubercular deposit was chiefly upon the free surface of the serous membrane, but was also found in considerable masses between the mesenteric folds. Tubercles were also found in the lungs, but not in large quantities.

The other case was that of a young man of twenty-one years. I saw the patient but once previous to death, and consequently can give only a very imperfect history of the symptoms. At the time at which I saw him, he was able to walk about, com-

plaining of great debility, and having a short dry cough, a hurried respiration, and very frequent pulse. Upon auscultating his chest, I found that already there was serious organic disease of the heart. The cardiac sounds appeared as if at a great distance, and I could distinguish a slight friction sound, together with an unmistakable *bruit de souffle*. The only information I could obtain from him in reference to his disease, was that he had just recovered from what his physicians had called typhoid fever. My prognosis was decidedly unfavorable, and as is frequently the case under such circumstances, he immediately passed from my hands. Several months after, hearing of his death, I solicited a *post-mortem*, to test my diagnosis of heart disease, which had been questioned by his attending physician. I ascertained that soon after my first and only visit, his feet and legs became oedematous, and gradually there was unmistakable evidence of effusion in the serous cavities both of the thorax and abdomen. The day of his death he was tapped in the abdomen, but with very imperfect results; the first puncture, made in the *linea alba* at the usual point, failed entirely, although the trocar was introduced its full length; a second puncture, one and a half or two inches to the right of the median line, succeeded in evacuating about a gallon of serous fluid such as is usual in ascites, but the abdomen still remained much distended. His physician desisted from any farther efforts, and in a few hours he sunk and died. I examined only the thorax and abdomen. The heart as it lay *in situ*, presented a remarkable appearance, seeming as if enormously hypertrophied, and covered by a smooth shining white pericardium. Upon section, however, I found the pericardium thickened from one-half to an inch, and perfectly adherent to the whole heart, the latter being atrophied, pale and soft, appearing as if the nucleus of this large mass. The thickened pericardium seemed composed of numerous layers of false membrane, of a yellowish color, and growing more and more dense toward the surface.

The pleura was sparsely dotted with minute tubercular points, both pleural cavities filled with a large quantity of serum. The lungs contained several considerable masses of tubercle, but were on the whole comparatively healthy.

Upon opening the abdominal cavity, the cause of the failure

of the first puncture was evident. The omentum was contracted and apparently extended into a long narrow mass reaching along the *linea alba* from the stomach almost to the pubis, about two and a half inches in width and one and a half in thickness, being an agglomeration of serous membrane, fat, pseudo-membrane, and tubercle, and firmly adherent to the parietal sheet of the peritoneum, as well as partially so to the intestines. Into this mass the trocar had entered, and consequently no result. All other parts of the peritoneum, the mesenteric folds, the visceral coverings, even to that which lines the fundus of the bladder, were densely studded with tubercles, upon the free surfaces chiefly, varying in size from a mere point to that of a large pea. At many points they lay quite loosely upon the serous membrane, and were readily scraped off by the back of the scalpel. Their number was truly incredible. The deposit was evidently of recent formation, as ulceration had nowhere taken place, nor indeed were there any present signs of inflammation, the peritoneum preserving its usual color and transparency except at the points of tubercular deposit. The only adhesions were those mentioned above, connected with the omental lesion. There was still a large quantity of water in the abdominal cavity, amounting at least to a gallon.

The pericardial lesion was evidently the oldest, but whether it was of a tubercular character, I am not able to decide. The loose character and successive layers of false membrane, as well as their yellowish color, lead me to think it was.—H. N. B.]

Paris, Feb. 22d, 1855.

To the Editor of the American Medical Monthly:

DEAR SIR—The number of American physicians in Paris is unusually small at present. Whether this is owing to the great pressure in money matters at home, to the fact that many are waiting for the opening of the Exhibition in the Spring, or to the prevalence of the opinion that the advantages offered in America are superior to those of the old world, is a question exceedingly difficult of solution under the circumstances. If the rash supposition be correct, and an impression does prevail

in the United States that the facilities presented to a medical student in this city are not sufficiently great to justify a long absence from home and an expenditure of the money necessary for a trip over the ocean, then does the public mind labor under a very serious error in regard to the facts of the case. Without designing to disparage the schools and hospitals of the United States, or to reflect in the least degree upon those distinguished men who have done so much to advance and improve the science of medicine at home, I am constrained to believe that the institutions and physicians of France are superior in many particulars to those of all other nations.

No man from abroad ever commenced a course of study in Paris without experiencing a consciousness of his deficiencies and an appreciation of the extent and importance of the subjects pursued, which surprised and discouraged him. Every one discovers points, bearings, relations, and distinctions connected with all the branches of medicine that he had never dreamed of before, and with which even the most ordinary instructors seem to be perfectly familiar. All of this results from the fact that in France everything is made a speciality and studied out in all its bearings laboriously and thoroughly. No man attempts to perfect himself in all departments, but each selects some particular subject, and devotes himself to its elucidation with an earnestness and constancy as wonderful in themselves as they are successful in their objects. When one who has been educated on a different system begins his labors here, he finds the stream, which he had once deemed so tranquil, direct, and limited, filled with a thousand obstructions, diverging in every direction, and finally flowing out in a broad current towards the ocean of universal truth. He discovers that instead of a holiday excursion in a sail boat, he has a long pull at the oar before him ere the end of his journey is attained. He learns to look at everything as through a microscope instead of the naked eye, and finds that there is nothing too unimportant for diligent research and investigation. For the reasons thus hinted at, Paris has attained a degree of celebrity unequalled by that of any other city of the globe, and which all who have had the least experience here will unhesitatingly pronounce well merited in every particular. It is certainly

true that this division of labor is carried farther here than elsewhere, and it necessarily results that the science of medicine, which is made up of these specialities, advances with greater rapidity, certainty, and completeness in France than in any other country of the globe. Again, though many changes have taken place in the political sentiments of the French people, yet amid all the outbreaks of popular violence, the fall of dynasties, and the inauguration of new governments, an intellectual democracy has been preserved which is an honor and an ornament to the nation. Here the humblest man can rise to the most exalted station. The poorest student may carry a professor's commission in his note-book. Place and preferment are the reward of merit alone. It is through the gate of the "Coucours" only that a man can advance to any station of honor and emolument. The rivalry induced in this manner stimulates to exertion, and indirectly but most materially conduces to the advance and improvement of every department of learning. Medicine feels the invigorating influence thus exercised upon its votaries, and marches on *pari passu* with its kindred sciences towards ultimate development and perfection. The system of testing by coucours the qualification of every candidate for the post he desires, is certainly one of the fairest, most certain, and least objectionable plans that the ingenuity of man could devise. It not only secures the first men for positions of honor and trust, and accomplishes many valuable results by the study and labor called forth from all, but it has also a moral effect upon the profession, the importance of which cannot be estimated in words. It directs the highest talent of the country towards medicine as the channel through which fame and advancement can best be attained. It affords to the aspirant for honors a security in the pursuit of them, which only the certainty of meeting with even-handed justice can inspire. It gives to the successful candidate an appreciation of the dignity of his position, and a consciousness of the extent of his own powers, which stimulate him to higher hopes, and more unwearied labors. It calls out the admiration and confidence of the public to an extent which renders the decision of a medical man within the sphere of his duties sufficiently absolute to enable him to carry out fully and properly any plan

of treatment that his judgment may suggest. In a word, it is a system founded upon principles of liberality, justice, and good sense, of which the present condition of medicine in France is the legitimate result, and from whose successful operation innumerable blessings are yet to be secured to the profession and the world.

No other city contains as many hospitals as Paris, at the present time. Nearly an hundred thousand patients are annually treated in them, and these are so divided that each receives a proper amount of attention, and contributes something towards the fund of information constantly collected by the clinicians of this great medical emporium. Hotel Dieu alone contains about 1300 beds, and has twelve rooms for the accommodation of males, and eleven for women. There a student can follow daily Trousseau, Rastau, and Jobert, all of whom have a reputation that is world wide. The latter, though anything but a very bold surgeon, is a fine operator, and treats diseases of the uterus with great success. He is particularly fond of the actual cautery in ulcerations of the neck of the womb, and uses it freely every day. I have seen twelve women subjected to this treatment in one morning, all of whom bore the application of the iron without manifesting the least evidence of pain. He employs generally a large ivory speculum, which protects the vagina completely, whilst it makes a thorough exposé of the neck of the uterus. It is really worth a trip over the ocean to see the womb as he exposes it during the application of the cautery, and to follow him around his female wards for a single morning. Jobert has acquired an unfortunate habit of scalding his internes, which renders him unpopular with his subordinates, but unlike French physicians generally, he is always particularly kind to his patients. He has no motive for sacrificing much to gain popularity, as by being an especial favorite of the Emperor, he gets along amazingly well without anything of the kind. He is principal surgeon to Napoleon, and has distinguished himself especially in his profession by his operations for vesico vaginal fistula, and his treatment of uterine diseases.

La Charité is one of the largest and finest hospitals of this city. In it are separate halls for every variety of disease, both surgical and medical, under the management of men who certainly have

no superiors in reputation, and but few equals in ability in the world. There Piorry daily demonstrates the infallibility of his judgment in regard to physical signs, and shows to what perfection the science of diagnosis can be carried. He is a strange character indeed—a little cracked perhaps on the subject of auscultation and percussion, and yet possesses an originality of mind, and a quickness of perception, which certainly entitle him to be considered a real genius. It is as amusing as interesting to watch him as he makes his examination of a patient; for he always does it with pencil in hand, marking upon the clothes the extent and situation of the concealed lesion, and manifesting the greatest delight at being able to work out a correct diagnosis in the case. I have not only seen him indicate the position of pectoral cavities in this way, but have known him to trace out the locality and size of the kidneys by means of percussion, and to indicate by new lines every day their increase or diminution under treatment. He is a very instructive lecturer whenever he succeeds in keeping to his subject, but is somewhat disposed to wander off upon any subject that presents itself to his mind, from the siege of Sebastopol down to the last report his enemies have started about him. He has written upon many subjects, and has displayed in all of his works much learning and ability. His book upon diseases of the spleen is his best work, whilst his attempt at introducing a new nomenclature in medicine is regarded as the most herculean and unsatisfactory effort of his life. Piorry is a professor in the Medical School of Paris, and has one of the best and most lucrative practices in the city. Andral is also connected with this hospital. He is old and failing, yet there is truth and wisdom in all of his words, and intelligence and genius in every glance of his gray eye. Surely, no man has contributed more to the science of medicine, and no name will go down to posterity more honored and respected than his. I felt indeed that I was in the presence of a man of mind when I first found myself in his lecture-room, and I drank in every word that fell from his lips as if his had been the voice of inspiration itself. Who would not willingly exchange all the troubles of an ocean voyage for the pleasure of listening to the instructions of a man of so much learning and distinction?

Bouillaud is also at La Charité. He has principally distinguished himself, as is well known, for his work on the heart, and his treatment of typhoid fever. He uses the lancet frequently and freely in the latter affection, striking "blow after blow" upon the root of the disease in the incipency of its germination. According to the statistics published by him, this plan of treatment has succeeded far better than any other which has been attempted in Paris, and is consequently entitled to the greatest consideration at the hands of medical men all over the world. It is true that Andral has attempted to dispute his facts, and has given the emeto-cathartic treatment the sanction of his approbation; but it cannot be denied that Bouillaud cures yearly hundreds of cases of this disease by the free use of the lancet in the outset. This statement may perhaps have a tendency to do away in a measure with the prejudice which exists in some parts of America against the remedy in question, and to induce a more rational examination of its advantages as a curative agent. Surely, if the highest authorities in France recognise the lancet as an important remedy in typhoid fever, the physicians of America should not reject it entirely, from an apprehension of the existence of a typhoid tendency. I have found that the lancet is freely used in France in many diseases by the best physicians, and with a degree of success which induces them to regard it as a most invaluable remedy. I have frequently seen pneumonic patients bled, when completely surrounded by cases of typhus and typhoid fever, and with the most immediate and permanent improvement in their situation. In a word, no improper prejudice exists here against the lancet, but it is made to subserve those important purposes which reason indicates and experience has proved of so much importance in certain contingencies.

It is in this hospital also that Velpeau lectures and operates. He is by all comparison the first man in his profession now alive; and it is surely a rich treat even to be able to see one who has done so much for medicine in all of its branches. He is diminutive in stature and has a heavy brow, a prominent forehead, small gray eyes, with an impatient rather than an intellectual expression of countenance. There is a good deal of dignity in his manner—perhaps sternness would express it

better—and a haughtiness about his bearing which indicate the existence of that self-esteem so characteristic of every Frenchman. He is evidently well assured of his own greatness, and labors to say in every look, act, and expression, “I am the wonderful Velpeau.” I could not help being amused at a little piece of his vanity the other day, which well illustrates “*the failing*” of *this* great man. He was going his “rounds,” with a large crowd at his heels, when he stopped before a simple case of varicocele, and said that “he wished to see how many nations he could make acquainted with that disease in one morning.” With that he called up separately an American, a Frenchman, a German, an Italian, a Spaniard, an Egyptian, and made each feel the tumor according to his directions. The assurance with which he proposed to enlighten the world on varicocele, and the delight manifested at finding himself followed by the representatives of so many countries, was a little disgusting even in one who had acquired all the right to independence of action which distinguished services to science and the race can secure. But this is only one side of the picture—the other has a far different aspect. Though age has whitened his locks and planted many a wrinkle upon his brow, his intellect still shines out with all of its primitive force and brilliancy. His judgment is riper than ever before, his discrimination has all the penetration of his best days, and his hand is as firm and steady as in the time of his manhood’s prime. He possesses a power of diagnosis, and a facility of adapting remedies to indications which nothing could secure, save the existence of a stupendous intellect, expanded by years of diligent research, and thoroughly filled with the rich gleanings of a long and careful experience. Though eminently distinguished as a surgeon, he is deeply learned in every department of medicine and all of its kindred sciences, so that it is impossible “to follow” him without daily obtaining a valuable idea or useful hint in regard to some matter of importance to the physician. He has recently been engaged in a discussion on the subject of the microscope and its discoveries, which, in view of all the circumstances, may be regarded as one of the greatest labors and most signal triumphs of his life. Notwithstanding the mighty revelations claimed to have been made by the micro-

scope, in regard to the nature and development of cancer cells, and in utter disregard of the talent arrayed in its support, he dared to make a furious attack upon the instrument, and succeeded in utterly defeating its friends. He showed that various microscopists had given different accounts of the development and progress of cancerous cells. He proved that the analysis of the same specimen had produced dissimilar results in the hands of persons equally well acquainted with the subject. He demonstrated the fallacy of relying upon this instrument in diagnosis by substantiating the fact that many tumors which had been pronounced non-malignant by its friends, had returned after an operation, whilst others considered decidedly cancerous had either disappeared spontaneously or been permanently obliterated by the knife. He established by positive statistics that those who had relied upon other methods of distinguishing the disease, had been infinitely more successful in forming a correct diagnosis than the advocates of this special and exclusive system. In a word, he drove his adversaries to the wall, and left them entirely subdued and at his mercy. Whether this is a victory for the cause of truth or not it is difficult to determine. He possesses so much grasp of mind, power of analysis, and dialectic skill, that he is more than a match for any member of the academy upon all subjects, and on any side. His is, however, beyond doubt a logical triumph, whilst time only can distribute its trophies properly. The opposite party account for their defeat by saying that Robert, the principal adversary of Velpeau, is no microscopist, and that they have none of their best men in the academy. No one can dispute the fact that Velpeau has displayed vast ability in this discussion, or deny that the record of it will add another stone to the towering monument which commemorates his achievements in the fields of science. In his concluding remarks before the academy, he emphatically declared that he did not desire to wage a war of extermination against the microscope, or to place himself among the uncompromising enemies of that instrument. He said that it had done much for science, and that if confined to its proper sphere, it would work out many valuable results in the future. He thought, however, that its proper place was one of subordination to the other methods of diag-

nosis which had been sanctioned by the experience and confidence of the wisest men ever known to the profession. He believed that it would best advance the science of medicine, by assisting instead of supplanting those processes of distinguishing disease worked out by the "old school," after so many years of patient labor and investigation.

Robert certainly maintained himself with courage and ability in the contest. He belongs to the "new school," as it is called here, the members of which are for the most part young, enterprising, and ambitious men, who are pressing on boldly in the great race for distinction and advancement in Paris. They are perhaps too theoretical in their principles, doctrinal in their views, and confident in their deductions, but they are full of hope and courage, and are ready to wage a terrible battle with "old fogysm" in all of its phases.

I should not forget to mention, in connection with this hospital, that Dr. Chareat, the Chef de Clinique of Piorry, gives a most excellent private course on auscultation and percussion. He is one of the most gentlemanly, as well as intelligent men I have met with in Paris, and renders his course particularly interesting to Americans by explaining himself in admirable English.

I have thus given a hasty sketch of some of the institutions and physicians of Paris, hoping that they might both prove interesting to your readers, and serve to give a correct idea of the advantages offered here to those who desire to improve themselves in their profession.

In my next letter I shall continue my description of the great men of this city, and give an account of many interesting things which I have seen since my residence in France. Yours truly, &c.,

EDWARD WARREN.

Some Reflections on the Nature and Curability of Cholera Asiatica, the result of careful observations of the epidemy during the years 1850 and 1851, and the experimental application of a peculiar method of treatment. Compiled and written from the notes of the observer, by HENRY MELVILLE, M. D.

I will preface this paper by the following explanatory remarks :—

1. The evidence of a credible witness is as valuable in medical science, as in any other department of human investigation, to the candid enquirer ; and the more intelligent, the more thoroughly educated is, *ceteris paribus*, the most useful witness.

2. With this conviction, I readily consented to bring under the notice of the profession the narrative and views of one who, not being a member of the profession, is still desirous that the fruits of his ample experience, such as has been enjoyed by very few within our ranks, should be generally known, and tested fairly, for the benefit of science; believing as he does that his is the true theory of the nature of this formidable disease, and the method of treatment pursued by him with constant and happy results, to be the one peculiarly adapted to its successful cure.

3. The narrator is a clergyman of the Protestant Episcopal Church, who, during the frightful epidemy which devastated the Island of Jamaica in the years 1850 and 1851, was in charge of an extensive parish, and from the want of sufficient medical aid was compelled to administer to the relief of large numbers of the victims of the disease. Since the abrogation of the apprenticeship system, which followed the emancipation of the slaves in the British West India colonies, the indifference of the negroes to the necessity of encouraging the residence among them of medical men ; the inability of the landed proprietor to remunerate the latter sufficiently to make plantation practice an object of tenure ; and the necessity compelling these to seek other fields of exertion and emolument, have all conspired to induce the country clergyman to give some portion of his time to the study of disease and its treatment, in order that he might be able, in cases of necessity and emergency, to give that ad-

vice without which many a life would otherwise be sacrificed to the ignorant prejudice and stolid apathy which characterize the half-civilized African. Thus impelled to commence a study at all times fascinating, some of the clergymen in those islands possess a remarkable amount of medical lore, and a sound practical acquaintance with disease in its several forms, as well as the means of treatment ; not a small share of the latter kind of knowledge depending upon a familiar acquaintance with the *materia medica* of the localities in which they reside.

4. I do not consider myself pledged to defend the views entertained, and now propounded, by the gentleman whose interlocutor I am ; nor do I feel myself called upon to comment upon or criticise them. I reserve my own opinion and judgment for a future season, being satisfied in the mean time to invite the attention of the profession to these views, and haply by the test of discussion and trial to prove the value of the information thus conveyed, and the method of treatment recommended. Placing implicit confidence myself in the reliability of the statements, and being well convinced that the motives of the narrator are founded in a sincere desire to promote the welfare of humanity and advance our knowledge, as yet imperfect, of the disease under consideration.

“ Asiatic cholera is said to have been unknown in the Island of Jamaica previous to the year 1850, and in the month of September of that year it first made its appearance in Kingston, the metropolitan town. From hence it extended to Spanish Town, distant about ten miles, and gradually spread around, following a line of swamps bordering the sea coast, to Old Harbor. Thence it proceeded onward to Vere and Clarendon and the lowlands of Manchester, then leaping the mountain range of Manchester, it settled itself in the low and swampy savannahs of St. Elizabeth. Following the shores of the island, and the internal arteries of communication, it seemed to spend its virulence on the lowlands, seldom appearing, and then only sporadically, in the mountains or high lands.

It is supposed by some that the disease was brought to Port Royal by a person who came from St. Thomas, and who died at the former place, and that the infection was propagated to Kingston by an individual who had been on a visit to Port

Royal at the time of the death of this person. Others presumed that the infection was *conducted* to the island over the sea, from the circumstance that the houses on the shore were the earliest invaded, and in which the violence of the disease was the most severe and the mortality the greatest. Others again maintained the opinion that the disease resulted from the long-continued season of wet and damp weather preceding the outbreak of the epidemy, during which it was presumed that the malarious or choleraic poison was generated.

The question of contagion was frequently and fully considered by the medical faculty, a majority of whom, among the number the late Dr. Chamberlayne a gentleman of great acquirements, and whose opinion was entitled to the highest respect, recorded their negation of such a doctrine.

The sanitary measures recommended by the Board of Health, and very generally adopted, consisted in the prevention of the accumulation of filth about the streets of villages and the dwellings of the people; in draining swampy ground; the liberal use of lime in whitewashing those parts of the buildings which admitted of it; and in making bonfires in the open air around the dwellings. In spite of every and all of these precautions, some of them it may be very unphilosophical, the disease prevailed very generally, and was extremely fatal.

Some idea may be formed of the mortality from the fact that in Kingston the ratio was fifty per cent. of the number attacked. The population of Kingston was about 14,000, the total number of deaths 4000; in Spanish Town the ratio was nearly the same. In the parish of Vere it was stated on good authority, in the public prints, that of 650 persons attacked by the disease, 40 only recovered!

The medical men, very generally, relied on the internal administration of opium and acetas plumbi, with the chalk mixture of the Pharmacopœia, a liberal use of brandy and diffusible stimuli. There were, however, some who made use of some other medicines and combinations of treatment, with the particulars of which I am not familiar.

My own district contained between five and six thousand souls, most of whom were attacked by the disease. I may safely assert, that the number of cases which came under my

observation was two thousand, and I think I underrate the amount. The mortality did not exceed ninety persons in all. Some of these neglected my instructions, and some died from other diseases. At the same time I frankly admit that these numbers have been disputed, but I regard the objections made to have been captious and unfounded. Official returns were made at stated periods to the authorities by requirement, and I made public through the local papers the plan of treatment I pursued and recommended. It must have been, however, overlooked, misunderstood, or misapplied, or I am confident a similar result would have marked its employment in other districts.

Before entering into any details of the theory I entertain, as to the nature of this disease, and the method of treatment I pursued with the most gratifying results, I will, at the risk of being considered somewhat prolix, describe the symptoms or phenomena of the disease as it fell under my observation, since it was mainly on a careful watching of and reasoning upon these, that I was led to mature my opinions, and determine upon the method of treatment which I adopted.

I have observed that the symptoms vary considerably ; some there are which invariably present themselves, and there are others which are only occasionally to be seen. The pulse is generally slow, yet firm, gradually receding from the wrist altogether as death approaches. The tongue is usually furred and of various shades of a dark color—the darker the hue, the greater indication of danger. In some cases, however, in the earlier stages of this disease, this symptom is not a very prominent one. Frequent discharges of rice water from the bowels, with floating particles, sometimes in large quantities, take place in the earlier stages of the disease, and as it gains ground become involuntary. These evacuations are attended with restlessness and anxiety, but with little or no pain ; sometimes by a slight irritation about the rectum, with increasing debility after each evacuation. Cramps are usually present, attacking the legs, thighs, and abdomen. Consciousness remains with the patient, but he does not seem to notice external objects much. This condition may last, if the disease is permitted to run its course unchecked, from twelve to forty-eight hours, seldom however continuing for more than twenty-four hours before death ensues.

The special symptoms are divisible into those which mark the active or first stage, such as great irritability of stomach, with frequent vomiting of a transparent fluid, in large quantities, accompanying the ingesta; and I have observed the increasing fatality of the attack to depend much upon the increasing frequency of the vomiting, and the increase in the quantity of this ejected fluid. In consequence of the debility occasioned by this vomiting, combined with the frequency of the alvine evacuations, the pulse rapidly becomes feeble and intermitting; the agitation and restlessness greater. There is insatiate thirst also. Sometimes fever accompanies this stage, but generally speaking it does not become much developed. From three to twelve hours is the limit of the life thus assailed.

Collapse is but the termination of the foregoing symptoms in their highest aggravation—but it may be the first and principal feature of the disease. In this stage the characteristic blue color and coldness of the body is observable. From three to six hours will suffice to produce death, and this termination has not unfrequently occurred in one hour.

The principal circumstances which have attracted my attention in the appearance of the body after death, have been the warmth of the abdomen, which commences to be manifest after death, and is sometimes very great. The internal surface of the stomach does not appear to be unhealthy, beyond the traces which it bears of the violent retching and vomiting. The blood is found coagulated in the vessels, and of a thick and tarry-looking nature. The liver, heart, brain, and lungs show signs of great congestion; while sometimes the brain exhibits no unusual appearance.

I confess that in as far as I was able to inform myself, not having a very extended or ready access to the literature of the subject, there appeared to me to be no very definite, and certainly no very satisfactory opinion existing as to the nature or cause of the malady, by which so many around me were being destroyed, and I consequently felt myself urged to determine upon some principle on which I might direct my reasoning and decide upon my treatment.

I will here briefly state the conclusions at which I arrived, and then give an abstract statement of the grounds upon which

I constructed my theory, and the reasons for the practice I adopted.

I regard the disease, then, to be the result of the action of a peculiar poison, miasmatic in its character, and which may justly be termed the choleraic poison, upon the blood, by which this fluid becomes resolved into its constituent elements of serum and fibrine, in other words, coagulated. I do not presume to determine what the precise nature of this poison may be, it is sufficient for the practical purpose of treatment that I recognize its action on the economy and the results of that action. Being thus disorganized, it is rendered unfit for the purposes of circulation—ceases to receive its due, or a sufficient quantity of oxygen through the ordinary source, respiration—and does not provide the elements of nutrition to the body.

Proceeding on this theory, my object naturally was to counteract or neutralize this poison, and so prevent its primary effect; or where this had been developed, to a certain extent to restore its vitality, promote its circulation, and so re-establish the equilibrium of functional power.

I am now aware that this idea is not a new one, although to me at that time it carried all the force of novelty, and I believe it, still, to be a correct one. Nor are the means I adopt any but those which are well known to the profession—the merit I claim for my system, is the peculiar mode of combining the several means hitherto separately employed by the medical profession. I have also since learned that M. Tardieu, a celebrated French physician, entertains the same views of the disease, and recommends in some essentials a similar course of treatment.

Is the blood itself not susceptible of inflammation as well as the local tissues? We have not, it is true, all the symptoms of inflammation of the stomach and bowels, but there is no doubt that an action is produced in both these organs which greatly resembles the effect of inflammation, even although many of the concomitant symptoms are wanting; but the absence of certain pathognomonic signs seems to establish the fact that this disease is altogether different from the choleraic invasion. For it seems to me to be an axiom in medicine, tacitly held, if not directly stated, that an excited action of the bowels must

be the result of one of two causes—inflammation or debility. For a diarrhoea is frequently the result of an enfeebled system. The consequence of such reasoning appears to have been to attribute the excited action of the bowels in cholera to a relaxed state of the nervous system. And on this theory it is, I presume, that we find so liberal a use made of opium, henbane, chalk mixture, alcoholic drinks, cayenne pepper, &c.

It appears to me that there is no good ground for presuming the disease to be one of debility. How then, it may be asked, is the great depression of the pulse to be accounted for, the complaint made by the patient of a sense of debility, and the inability to maintain the erect posture?

The pulse of debility is weak and intermitting; its character in cholera is small, hard, and *oppressed*. The sense of debility arises from the want of circulation; that which does exist is not the circulation of genuine blood feebly impelled through the system, but the sluggish coursing of a thick and tar-like substance, which the heart but imperfectly impels through the vessels. Hence the *oppression*—not debility—oppression arising from the loss of the fluidity of the blood. On attempting to bleed this is clearly demonstrated.

Dr. Davy, in his experiments made in India on the bites of venomous serpents inflicted on birds and animals, found that the blood was disorganized in a similar manner, the serum being separated from the solid parts, and pointed out this as the immediate cause of death. So also in fevers of miasmatic origin, particularly in the aggravated types of bilious remittent, we find the same phenomenon exhibited.

This disorganization of the blood, and imperfect circulation, will sufficiently account for the various symptoms exhibited during the life and after the death of the patient. The congested condition of the whole capillary system, producing the blueness and coldness of the surface and the extremities, and the gorged condition of the internal organs; the gradual recession of the circulation from the surface, and the movement of a denser fluid in the larger vessels which are internally distributed, is the cause of the collapse.

I do not attempt to reason upon the dependence of the several other phenomena which are observable in this disease, as

the effect of the choleraic poison on the blood, inasmuch as my views are somewhat peculiar, and may not be congenial to the recognized pathological dogmas of the schools, but I will venture to proffer a few remarks on the character of the poison. Observation seems to me to have established the fact that whatever it be, it is connected with, or dependent upon, the decay of vegetable matter and of animæ substances sometimes, and that water is an essential element in its genesis. The long continued rains which preceded the outbreak of the disease in Jamaica, brings to mind the fact that similar weather occurred in London previous to the great plague.

We are told by chemists that hydrogen is the base of miasmatic poisons, and regarding, as I do, the miasmatic and choleraic poison to be identical, I regard hydrogen also as its base. It is somewhat lighter than ordinary atmosphere, and is consequently constantly rising. This poison is thus inhaled by the lungs in the ordinary act of respiration, and being there brought into contact with blood exerts its peculiar poisonous or disorganizing influence. The greater suddenness of attack exhibited in some cases, and the greater intensity perceived in others, are the results of the greater quantity inhaled in a given space of time, as well as the greater intensity of the poison itself.

With these views as to the nature and effects of the poison, my first endeavor is directed toward the restoration of the circulation to as great activity as possible, in order that the vitiated blood may be brought rapidly under the action of the oxygen of the atmosphere. I know of no means so well calculated to bring this about as bleeding, and therefore I usually make every effort at any stage of the disease to obtain from six to twelve ounces of blood from a vein. This is sometimes exceedingly difficult to accomplish, but by moderate perseverance and the combined use of the warm saline bath, frictions, &c., we will generally succeed in obtaining a certain quantity. And it is certainly delightful to witness the immediate result of the flow of blood. The retching is usually checked as if by magic, the patient declares himself to be relieved from the sense of uneasiness, and will soon become amenable to the action of the remaining medicaments which I employ and consider to be essential.

It is well known that chlorine has a strong chemical affinity for hydrogen, and with the end in view of neutralizing the chemical basis of the choleraic poison, I have been in the habit of exhibiting some of the salts of chlorine, both internally and by means of the bath. The chloride of sodium is the salt upon which I have principally relied. It is an exceedingly nauseous dose, and patients object very strongly to its use at first, but on experiencing the beneficial effects it produces, will of their own accord continue its use, and crave its administration. The solution for internal use should be a saturated one, as well as for the bath.

As soon as evidences manifest themselves of returning circulation, it is essential to administer the chloride of mercury, and this I do in scruple doses at intervals of three hours, until the excretions begin to change in character, and then I diminish the quantity and increase the interval. In some instances when the symptoms have been very alarming, I have given the calomel in 40 grain doses at first, repeated in scruple doses afterward, followed by a draught of the solution of chloride of sodium, in the proportions of about two tablespoonfuls of the salt to a pint of water.

When the discharges of serum are very copious, and the pulse at the wrist gone, the injection of factitious serum, containing some of the salt in solution, into the veins, according to Dr. O'Shaughnessy's plan, will be very beneficial. I have been in the habit of employing the nitrous acid also, and with marked benefit in cases where there is great sinking. The mode of administration is as follows:—Mix a scruple of nitrous acid in an ounce of peppermint water, give a fourth part of this mixture in a cup of mucilaginous drink, and repeat if necessary. I have frequently found the circulation to be quickly reestablished under its use.

I have also occasionally employed camphor, as well as some refrigerants and stimulants, in cases where the apparent debility was great.

As soon as, from the altered state of the secretions, returning circulation, and other favorable indications, convalescence may be prognosticated, a light and generous diet should be adminis-

tered, with advantage even when fever is present, or in spite of the disinclination, or want of appetite, of the patient.

Should fever arise in the restoration of the circulation, it must be treated *secundem artem*. A repetition of the bleeding may be necessary, and most frequently proves advantageous. The use of the calomel must be continued until the secretions become natural, and the other unfavorable symptoms disappear.

By a constant and hopeful perseverance in this mode of treatment, regulating my doses to the age of the patient, and combining them judiciously according to the existence or prominence of the several symptoms, I have met with the success which has been already alluded to, and which has inspired me with such confidence in the correctness of my views of the disease, and the efficiency of the treatment, that I am anxious the profession should give it their attention, and be induced to avail themselves of it. I am certain that a trial would establish their confidence, and entertain no doubt that the satisfactory results which would ensue, would lead them to regard it as the most rational mode of treatment."

Such are the reverend gentleman's statements. It will be perceived that his chief reliance is on the lancet, the chloride of sodium, and nitrous acid. There is no charlatanry in the mode of treatment, and nothing which should debar us from employing these remedies, in combination experimentally. We have his statements for our encouragement as to the results, and should these be confirmed by the success of others, a great boon will have been conferred on the therapeutic department of our practice. I am aware that similar means have been recommended by other writers, and that disappointment has been generally expressed in the result of the calomel treatment, as well as the saline; but in the face of such gratifying results as now stated, it would be unphilosophical to condemn this combination of means without the test of experiment.

Analyses of Bone and of Congress Water.

The following analyses were made with care by one of the advanced students in the chemical laboratory attached to the New York Medical College. R. O. D.

Analysis of the Water of the Congress Spring (Saratoga).

Two hundred grammes, by weight, of the water were found to be composed as follows :—

Water,	-	-	-	-	-	198.160
Phosphate of Lime,	}	-	-	-	-	0.070
Phosphate of Magnesia,						
Chloride of Magnesium,	-	-	-	-	-	0.710
Carbonate of Lime,	-	-	-	-	-	0.110
Carbonate of Magnesia,	-	-	-	-	-	Traces.
Chloride of Potassium,	-	-	-	-	-	0.001
Chloride of Sodium,	-	-	-	-	-	0.529
Free Carbonic Acid,	}	-	-	-	-	0.420
Oxide of Iron, Silica, and						
Loss,						
						<hr/> 200.000 gras.

Analysis of the Frontal Bone of an Adult and of a Child.

ADULT.		CHILD.	
Alk. Sulphates and Chlorides,	2.450	Alk. Sulphates and Chlorides,	26.007
Organic matter, - - -	36.000	Organic matter, - - -	15.000
Phosphate of Lime, - -	54.000	Phosphate of Lime, - -	50.000
Carbonate of Lime, - -	5.995	Carbonate of Lime, - -	8.993
Fluoride of Calcium, - -	1.420	Carbonate of Magnesia, -	Traces
Phosphate of Magnesia, -	Traces	Phosphate of Magnesia, -	Traces
Loss with Carbonic Acid, -	0.135	<hr/>	
<hr/>		100.000	
100.000			

ARTHUR DU BERCEAU.

New York, April 11th, 1855.

PART II.—REVIEWS AND BIBLIOGRAPHY.

“Nullius addictus jurare in verba magistri.”

Authors are not apt to be pleased with reviews unless the opinions they express are complimentary to their productions. On this account, if no other, it is always just to allow the author an opportunity to reply to a reviewer, if he desires so to do, in the periodical in which any strictures upon him may have appeared, provided always that he keeps within the limits of propriety.

It is an axiom that every man who publishes must make up his mind to criticism of his articles, and it shows in some measure his unfitness for an author, if he cannot bear with equanimity severe criticisms upon what he has written. But no one whose opinion is at all worth considering, can, as a reviewer, give praise to all works alike. This is sometimes done, but it is at the sacrifice of all principle. Very frequently it is an unpleasant task to criticise a publication as its merits or demerits demand, and still it ought to be done. No reviewer, we presume, expects the author will do otherwise than see gross injustice in any strictures he may be called upon to make, and he takes this into account. No doubt a malicious, unfair, revengeful review may be written, as for the purpose of gratifying some spite, or injuring a rival, or from other unworthy motive, but it is not of such that we speak.

In the reviews and notices of books which have appeared in the MONTHLY, no such base motive has ever been allowed to have influence. Several works have been spoken of without commendation, and others with some severity, and probably in each instance the author has believed that he was a martyr to some party feeling in the reviewer. Only two have asked for opportunity to reply through our pages, and it has been granted. Others have contented themselves with nursing their wrath in private, no doubt much to their own inconvenience and discomfort. Oddly enough we are called upon this month to insert two replies to notices of articles, and this fact has suggested, without particular reference to either of them, the preceding remarks.

The first is a reply to an article in our last number on Dr. Hutchison's paper on Cholera in Brooklyn. In that article two errors occur, and both are repeated. In transcribing from the tables in which the percentages of mortality were calculated, the error was committed* of putting down to the credit of the Franklin Street

* See p. 285 of April number.

Hospital the percentage of recovery, in the room of the percentage of deaths, thus giving a too favorable result for those admitted in complete collapse, and too unfavorable a result for those admitted in partial collapse. This error Dr. Hutchison has pointed out, and so far as he is concerned the reviewer regrets it; though so far as other parties are concerned, it may satisfy them that no injustice was intended to them. The author must take the reviewer's word for it that it was entirely accidental and unintentional, and the reviewer certainly lays no claims to infallibility.

With regard to the other points of the reply, the reviewer does not feel called upon to make any answer, except that on a careful re-perusal of Dr. Hutchison's article as printed, he does not see any point which he does not think was justly and fairly made. The author should remember that the reviewer had not the additional statistics to which he now resorts, and that the injustice, if any exists, was committed by the author, in not preparing his paper more carefully. The reviewer does not think that the paper does justice to Dr. Hutchison, neither does he think that the review does injustice to the paper; and he believes that Dr. Hutchison will yet feel grateful to him for calling his attention to his defects as an author. All learn sooner or later that we never see ourselves as others see us. The reviewer, however, absolutely denies that he at all intended to injure Dr. Hutchison, either directly or indirectly. He knows of no interest of his own, or of his friends, that could be advanced by it, or of any other motive which could at all tempt him to so unworthy a course.

The other answer explains itself. It was offered to the Examiner, in which the review appeared, but was rejected for reasons which appear to us quibbles. The editor, or the reviewer, has shown himself a little "thin skinned," as the saying is, in not being willing to allow his readers to hear the other side. However, that is none of our concern, and we merely mention it as a passing reflection. Meantime we must do what we can to perform the duty which properly devolved upon the Examiner. With these prefatory words, we give the two papers.

There was in the last number of the *American Medical Monthly*, under the head of Reviews and Bibliography, a notice of my account of "Cholera in Brooklyn in 1854," which was reprinted in pamphlet form from the *New York Journal of Medicine*. If my paper was in the possession of the readers of that article, I should consider this

reply unnecessary ; but this is not the case, and as it has placed my observations and deductions in an erroneous position before them, it would scarcely be proper to allow it to go unexamined.

I do not desire to detain the reader by an examination of the less important parts of the review, but will proceed at once to notice the value and correctness of the statistics which it contains, furnished from the different hospitals, by which it is apparently demonstrated that the per centage of deaths in the Brooklyn Cholera Hospital is nearly twice as great as in the New York Cholera Hospitals. This involves the success of the treatment, which, as is justly remarked by the reviewer, is the most important part of the whole subject. And this importance of having the results of the treatment fairly presented, is the only reason which has induced me to correct some of the errors which his notice contains. In the following tables, reproduced from the review for the purpose of correction, &c., with the addition of the actual number of deaths, those admitted in the *consecutive stage* are omitted for the purpose, as suggested in the review, of enabling us to institute a proper comparison ; and for the same purpose the first and second stages of the Franklin Street Hospital are united. It should also be remarked that the *moribund* and those who recovered from cholera and subsequently died of *other diseases*, are excluded from the tables of the New York Hospitals, while they are included in the table of the Brooklyn Hospital, although, as we shall see farther on, they are said to have been likewise excluded in the tables of the latter institution.

Mott street Hospital.

			Admitted.	Died.	Per cent. deaths.
First stage,	-	-	155	6	3.87
Partial collapse,	-	-	66	40	60.6
Complete collapse,	-	-	64	54	84.37

Franklin street Hospital.

First stage	-	-	192	12	6.25
Partial collapse,	-	-	167	67	40.12
Complete collapse,	-	-	192	128	66.66

Brooklyn Cholera Hospital.

First stage,	-	-	18	00	0.00
Partial collapse,	-	-	17	1	5.88
Complete collapse,	-	-	100	82	82.00

The above statistics have been revised and *corrected* by comparison with the statements furnished by the Franklin street Hospital in the March number of the *New York Medical Times*, and by the Mott street Hospital in the *Monthly* for November, 1854. I will here call

the attention of the reader to the errors made by the reviewer in calculating the per centage of deaths in the Franklin street Hospital. Of those admitted in partial collapse, 59.88 per cent. are said to have died instead of the proper number, 40.12 per cent.; and in complete collapse, 33.34 per cent., instead of a fraction less than double that number (66.66).

The above tables do not indicate that the treatment pursued in the Brooklyn Cholera Hospital is so ineffectual as the reader of the review may have been induced to suppose. And if we exclude from the table furnished by the hospital of this city the *moribund*, which I find from an examination of the hospital case-book amount to 19, and the 23 cases which, as stated in my report, recovered from cholera, and subsequently died of consecutive diseases, thus placing the three tables on the same footing, the per centage of deaths among those admitted in complete collapse is reduced to 49.38 per cent.

The review next contains a table professing to indicate that the per centage of deaths in the Brooklyn Cholera Hospital is nearly twice as great as in the New York hospitals, preceded by the following paragraph :—

For the purpose of bringing the three tables into exact parallelism, “we omit those noted as received in the *consecutive stage*, as none are so classified in the Mott street Hospital, and give the per centage of deaths among all others received, excepting of course the *moribund*. This will give the number of deaths from cholera of those received in the various stages of the disease, and will exclude those who subsequently died of other *diseases*, as delirium tremens, phthisis, &c.” Then follows the table.

Hospital.	Per centage of deaths.
Brooklyn, - - - - -	61.48
Franklin street, - - - - -	37.56
Mott street, - - - - -	35.09

The reader will bear in mind that the large per centage of deaths which appears to have occurred in the Cholera Hospital of this city arises from the fact that the *moribund*, and those who recovered from cholera and subsequently died of *other diseases*, have *not* been excluded in making the calculation, the statement contained in the review to the contrary notwithstanding. The exact number of cases admitted moribund into the Brooklyn Cholera Hospital, it is true, is not given in my report ; but it is stated that “*those admitted in articulo mortis, amounting to a considerable number, are placed under the head of com-*

plete collapse," p. 8; and the attention of the reader of the review should have been called to this fact in connection with the above table. The number who died of other diseases after their recovery from cholera is, however, given (as is seen in the following extract from my report) immediately after the table from which the above percentage was calculated.

"Of the 82 deaths occurring among those admitted in complete-collapse, 23, or 28 per cent., reacted and died of consecutive diseases."

Another fact which should not be overlooked, is, "that cases admitted with diarrhœa," as stated in my report, "which might have terminated in cholera if they had not been treated, are included under the head of other diseases." In an examination of the hospital case-book, I find 8 cases thus classified. And as nothing is said of such cases in the reports of either of the New York cholera hospitals, we may infer that they were classed as incipient cholera in those institutions. If, therefore, we omit the moribund, and those who subsequently died of other diseases, and add 8 cases of diarrhœa to the number classified as in the first stage of cholera in the report of the hospital of this city, "the three tables are brought into exact parallelism." This furnishes the following table.*

Hospital.					Admitted.	Died.	Per cent. deaths
Franklin street,	-	-	-	-	551	207	37.55
Mott street,	-	-	-	-	285	100	35.08
Brooklyn,	-	-	-	-	124	41	33.06

If we give to each hospital the same relative proportion of cases in the different stages of the disease, the comparison will be still more favorable for the hospital of this city. It was justly remarked by Dr. Conant in his final report of the Mott street Hospital, that "it is well known to every intelligent physician that the mere figures of an epidemic hospital report are no criterion of the success of practice in that hospital, *without a fair statement of the condition of the patients when admitted.*"†

The following table shows that the proportion of cases admitted in the stage of complete collapse, is about twice as great in the

* In Dr. Budd's report of the Franklin street Hospital nothing is said of cases admitted with cholera that subsequently died of other diseases. It is probable that such instances occurred, as in the other institutions; if so, they should be excluded, and this would diminish the per centage of deaths given in that hospital.

† American Medical Monthly, November, 1854.

Brooklyn as in the New York cholera hospitals, while the number admitted in the earlier stages is much less. It has been stated that in the hospital report of this city, those admitted moribund were placed under the head of complete collapse, and it is therefore necessary in order to place all on the same footing, to unite the two classes in the New York hospitals.

Hospital.	Total Admitted.	Admitted in Complete Collapse.	Per Centage.
*Brooklyn, -	143	100	70.00
Mott street, -	329	108	32.82
Franklin street,	594	235	35.59

I had here intended to stop, but I trust the reader will pardon me for alluding to two other points in the review. In describing the lesions found in the head, I stated, that in "one case the arachnoid, where it passes over the sulci, was raised by air, which escaped when the membrane was punctured." The existence of this lesion, has been questioned. I am enabled to inform the reviewer, however, that it was observed by three of the most respectable medical gentlemen in this city, as well as by myself, one of whom, Dr. Bauer, an accomplished surgeon and pathologist, made the examination for me. The anomaly excited much interest, and it was examined with care, until every one present became satisfied that just such a lesion existed as has been described.

The reviewer thinks that the condition of the female sexual organs should not be mentioned among the *post mortem* appearances of cholera, as they have no more relation to the disease than a fractured and badly united tibia. This may be true, but I will call his attention to the fact that the morbid condition of the female genitals in cholera has been regarded as worthy of attention by pathologists of unquestionable respectability. Thus, Reinhardt and Leusbuscher, the distinguished Berlin pathologists, than whom, the opinions of none are more entitled to respect on this subject, state that "*the genital organs of the female were, next to the intestines and kidneys, the parts which had most commonly undergone structural change.*" Virchow, one of the most reliable living pathologists, has also considered the *post mortem* condition of the uterus and its appendages worthy of record; and Dr. Gull, in his valuable "Report on the Morbid Anatomy of Cholera," has collected from various sources a minute and extended account of the morbid anatomy of the female sexual organs in this disease.†

* Including cases classified as diarrhœa.

† Report on the Morbid Anatomy of Cholera, to the Royal College of Physicians, p. 36. London, 1854.

In conclusion, I will leave the reader to decide whether the notice of my paper, published in the last number of the *Medical Monthly*, is becoming the character of a candid and impartial reviewer? Whether the review was written for the purpose alleged of preventing the injurious influence of my article, "so far as it may have any influence" upon the profession? Whether the unfairness with which it has been shown my report has been dealt with, arises from carelessness or design? And to the same tribunal I submit, whether the reviewer may not yet have to "go hunting for successful results in remarkable epidemics," to prove that a larger proportion of recoveries, considering the stage of the disease when treatment was commenced, did not take place in the Brooklyn Cholera Hospital than in any other hospital in this country or elsewhere? I will also leave the reader to determine the necessity and relevancy, in a review, written professedly with "sincere sorrow," &c., of the ungenerous allusions to my remarks at the New York Pathological Society.

My sense of self respect induces me to pass in silence the other ungentlemanly personal allusions contained in the review.

JOSEPH C. HUTCHISON.

BROOKLYN, April 20th, 1855.

To the Editor of the Philadelphia Medical Examiner:—

In asking the privilege of correcting some errors which I find in an article published in the April number of the *Examiner*, purporting to be a review of Dr. Watson's recent work "On the Topical Medication of the Larynx," &c., and a paper by the writer, "On the Employment of Injections into the Bronchial Tubes," &c., I wish to be understood as making this request, not on my own account—for I have uniformly disregarded anonymous attacks on myself, and my writings—but because the writer of the article referred to, in his attempts to do me injury, has, by his misstatements and perversion of facts, placed others in a *false position*, and has done injustice to medical science.

Passing by, for the present, the illiberal and unjust declarations contained in the first paragraph of the reviewer's article, I come at once to the proof, that the reviewer has made out a false issue, by direct misstatements and by a suppression of a portion of the truth. On page 205, the writer says, "Nor is Dr. Watson quite able to digest the sponge which, according to Dr. Green, dropped into the

windpipe of a man whose larynx Dr. Peaslee was cauterizing." Now there is not a word in what Dr. Watson, Dr. Peaslee, or myself have written to sustain this assertion.

The case here referred to, is published in full, by Prof. E. R. Peaslee, in the "New Hampshire Journal of Medicine" for April 1852; and is one of much interest. It is that of *John A. Dobie*, who, "having lost the cartilaginous, and also a part of the long septum of the nostrils, from a scrofulous affection, was in the habit of introducing a piece of moistened sponge into the nasal passages, several times a day, to remove the fetid secretion produced by the still progressing disease, just mentioned. On the 23d of July, 1850, while applying the sponge as usual, before entering his shop, immediately after dinner, he accidentally let it slip from his fingers, and it passed back at once through the posterior nares,"* and was carried by the force of inspiration, as it was subsequently found, through the opening of the glottis into the larynx and trachea, and was impacted in the latter "just above the bifurcation." Drs. Peaslee and Crosby, of Hanover, were called to see the patient, and were compelled, ultimately, to perform the operation of tracheotomy. Through the opening thus made, Dr. Peaslee, after several efforts, succeeded in removing, with the forceps, this foreign body, which, on accurate admeasurement, was found to be, as Dr. Peaslee asserts, " $1\frac{3}{4}$ inch long, $1\frac{1}{4}$ wide, and $\frac{1}{16}$ of an inch thick." In addition to all this, there were two small portions, of the size of a pea, which were torn away in the first fruitless attempt to remove the mass. In commenting on this remarkable fact,—that a piece of sponge of this size could pass into a larynx which, although "large and well proportioned, was in no aspect abnormal,"—Dr. Peaslee observes:—"This case finally settles the question; if anybody still has any doubts of the possibility of passing a sponge through the rima into the trachea, in the treatment of tracheal disease. The sponges used by Dr. Horace Green for that purpose, are about half an inch (generally less) in diameter. The one I actually removed was fourteen times as large as one of these, and the whole mass, at first, was fifteen or sixteen times as large."

Now it is the above statement, by Professor Peaslee, one which is scientifically and *mathematically* correct, and made by a man, who for accuracy of research, and carefulness of observation, is unsurpassed by any one in his profession, that your reviewer, along with Dr. Watson, would characterize as being "grossly inaccurate." "For,"

* New Hampshire Journal of Medicine, Vol. II, p. 297.

says Dr. Watson, and after him his reviewer, "by the most undoubted rule of arithmetic, the worthy Professor would have us believe that the sponge he removed from the tracheal (or right bronchus, for it is not very clear which he means,) was one-half inch multiplied by fourteen in diameter, viz.—seven inches; and, indeed, that the whole mass was even larger than this at first; that it was seven and a half or eight inches, *i. e.*, two-thirds of a foot in diameter." Now, to any ordinary school boy, who, from a piece of sponge of the above size, can readily manufacture "fifteen or sixteen" cubes, "half an inch in diameter," *this* way of "figuring up" will not only appear "simply ridiculous," but perfectly "absurd!" We venture the assertion that Dr. Watson will never issue a second edition of this really valuable work, without correcting this "gross inaccuracy" of calculation on his part.

But, to notice still other obliquities of statement in this review. With regard to the use of nitrate of silver in the treatment of "membranous croup," the reviewer declares that Dr. Watson "is altogether opposed to its employment, unless before any exudation has been poured out, which is equivalent to saying before there is any croup to treat." And again—"The large and intelligent experience of our author is, it will be observed, directly opposed, not only to that of Dr. Green, but also to the results of so candid and enlightened an observer as Dr. Ware." (p. 207.) Every reader, who will examine the chapter in Dr. Watson's work on exudation croup, will assuredly admit, that the reviewer, by suppressing a part of the truth, has made out a false issue between Dr. Watson and myself. He will see, that, instead of being "altogether opposed" to the topical employment of a solution of nitrate of silver, in the treatment of this disease, Dr. Watson, for certain "theoretical reasons," objects to its use in "acute cases of croup, *during the exudative stage only.*" In the pre-exudative stage, and after the intensity of the inflammatory action has been reduced—in both these stages topical applications to the larynx are advised by him. "In children or in adults," he remarks, "predisposed to the disease, such a group of symptoms, as that just referred to, may be considered as certainly indicative of the first stage of exudative croup. But, no exudation has yet been poured out, and, according to my experience, the disease may here be checked, by the application of an appropriately strong solution of the nitrate of silver;" (p. 50,) and Dr. Watson here refers to several interesting cases where this abortive treatment was perfectly successful. So, likewise, "when

the exudation has been cast off," Dr. Watson declares that he considers the renewal of the topical treatment as one of "the appropriate measures to be employed." (p. 54.)

Some years ago, in a notice of my work—" *On Croup and its Treatment by Topical Medication*," in the "*American Journal of the Medical Sciences*," this same reviewer, or, if not the same, one whose style and animus bear a most apparent relationship to those of the present writer—berates, in no measured terms, the author of the above work, for the manner in which he alludes to the views of Dr. Ware in this publication. He writes—"Dr. Green next quotes the (we hope) well known paper of Dr. John Ware, on the "*History and Diagnosis of Croup*," but apparently for no other purpose than to make a forced application of a cautiously expressed doubt of that sound thinker and conscientious physician. In order to accomplish this object, both the letter and the spirit of Dr. Ware's paper are misrepresented."* It is an interesting fact, and it may be consoling to the author of this defence to know, that at the time of the appearance of the above review, I held, and still have in my possession, a letter from Dr. Ware, *thanking me for the manner in which I had alluded, in my work, to his labors*, and commending this same work on croup, in terms which are exceedingly gratifying to its author!*

A brief extract from the *last* publication of Dr. John Ware, on the treatment of membranous croup, may explain *why* he is now brought forward, by the reviewer, and placed in the same category—so far as his own and the opinion of Dr. Watson is concerned—with Dr. Green. In a paper, read by Dr. Ware, before the Suffolk District Medical Society, in March, 1850, termed—"Additional Remarks on the Treatment of Croup," five cases of this disease are referred to, all of which were cases of true membranous croup. Three of these proved fatal. In the two other cases the same general course of treatment was followed, says Dr. Ware, which had been pursued in the treatment of the three fatal cases—"with the addition of the introduction of a sponge, wet with a solution of the nitrate of silver, into the larynx. In each of these cases the application was made as early in the disease as I became satisfied of its distinct character. It was repeated morning and evening. It decidedly gave relief to the breathing, soon after each application, and both cases ultimately recovered perfectly. For the suggestion and adoption of this valuable addition to our means of treating this

* American Journal of the Medical Sciences, Vol. XVII, p. 117.

formidable disease, we are indebted, as is well known, to the enterprise of Dr. Horace Green of New York. The profession, I think, owe to him a large debt of gratitude, for the energy and perseverance manifested in the introduction of this remedy, and I am the more disposed to render this tribute to him, because so many attempts have been made to detract from his merits in relation to it.”*

But to return to our reviewer. On page 207, I find the following—“As regards ‘follicular disease of the larynx,’ a stalking-horse from behind which Dr. Green has acquired so large a *clientelle*, Dr. Watson is disposed to regard it altogether as what Carlyle would call ‘a sham.’” Here, then, in order to make out a case, we again have the *suppressio veri*, which, without noticing the undignified *fling* contained in the first part of this sentence, I shall attempt to prove. Under the head of “chronic laryngitis,” Dr. Watson says—“I am pretty sure that the dreadful affection so vividly described by Dr. Green, as common in America, is, fortunately, of rare occurrence in this country; for, out of a considerable number of laryngeal cases presented to my observation, I have only met with a few which might be accounted as instances of Dr. Green’s follicular disease.” (p. 64.) He, however, proceeds to describe the few cases of the disease which had been observed by him; in which “the fauces and pharynx were studded over with white spots, the suppurated follicles, surrounded by red and swollen mucous membrane,” and where the patients had a “husky whisper which could only be continued more than a few minutes at the expense of much pain, referred to the region of the glottis,” with a cough which “was harassing, and the expectoration profuse, frothy, and sometimes mixed with blood, at other times with little white cheesy substances.” (p. 65.) “I believe these,” continues Dr. Watson in reference to the cases thus described, “are fair samples of what Dr. Green would call follicular disease of the pharyngo-laryngeal membrane;” and so we, ourselves, believe, Mr. Editor; nor do we think that we, or any one, could give a more truthful, or graphic description of “follicular disease of the larynx” than is here portrayed. “There can be no doubt,” continues Dr. Watson, “of the follicular affection of the pharynx;” but to account for the symptoms present, he does not think it necessary to suppose that the laryngeal follicles are in the same state with those in the pharynx.” Others, with myself, are of the opinion, that in follicular affection of the “pharyngo-laryngeal

* Boston Medical and Surgical Journal, Vol. XLII, pp. 267-268.

membrane," the follicles of the *larynx* may, and do, in many cases become involved in the disease, along with those of the pharynx. It is because of this difference of opinion, with regard to the *extent*, (not the nature or the existence) of the disease, that the reviewer has uttered the positive declaration, that Dr. Watson "is disposed to regard it altogether as a 'sham!'" Indeed, the writer does not hesitate, throughout the whole review, when an opportunity presents, to pervert, or to withhold a part of the opinion of the author, or to throw out an injurious and unfounded insinuation, if, by so doing, he can convey the impression that Dr. Watson condemns or disregards the views of the writer, who "put forth a Treatise on Diseases of the Air Passages," and who, notwithstanding "the uncandid statements and unscientific descriptions contained in his essay," has been guilty of "attracting a good deal of attention from the public and the profession."

There is one admission in my favor I must compel the reviewer to make. In his notice of Dr. Watson's chapter on whooping cough, he says:—"This chapter on the laryngeal treatment of whooping cough is extremely interesting. The author believes that if the local and inflammatory element is met by cauterization, after the acute stage is passed, the spasmodic element will of itself subside. As to the practical results, they are indeed most encouraging. Taking the cases treated by M. Joubert, and by Dr. Watson" (and the cases amounted to one hundred and thirty-two in all), "we find that 57.4 per cent. were cured in two weeks, and of the remainder 36.5 per cent. were cured within four weeks. The usual treatment, on the other hand, requires an average duration of one and a half to three and a half months." (p. 208.)

Now, Mr. Editor, how came Dr. Watson to treat topically this disease, in which he has been so successful, and has accomplished so much good? If you will turn to his original paper on whooping cough, read before the Medical Society of Glasgow, and first published in the *Edinburgh Monthly Journal*, for December, 1849, you will find that not until after the publication of my works, did Dr. Watson think of treating, by topical medication, this or any of the other diseases about which he has written in his excellent book. On page 1290 of this number of the *Journal*, is this declaration—"I shall now, in a few words, explain the way by which I came to try, for that purpose," (arresting the peculiar nervous irritability of the glottis,) "the topical application which I am about to recommend to the society."

"Soon after the publication of Dr. Horace Green's work on 'Diseases of the Air-passages,' I had several opportunities of putting to the test of experience his method of treating chronic laryngeal affections, viz., by touching the lining of the larynx with a solution of the nitrate of silver. My trials fully confirmed his statement of the efficacy of the treatment referred to, and I soon found that I could with advantage carry out a similar practice in many other diseases, such as in ordinary acute bronchitis, in the intervals of asthma, and even with relief of the tickling cough in early phthisis. Having thus established, to my satisfaction, the efficacy of a topical application of caustic solution in cases, not only of chronic disease of the larynx, but in all cases of inflammatory irritation of the glottis, I came to the conclusion that it might operate beneficially in the whooping cough; and, after a pretty extensive trial, I have not been disappointed." *

It will be seen, then, from Dr. Watson's own admission, that to the reading of my work on "Diseases of the Air-passages," he attributes "the way by which he came to try topical applications" in the treatment of whooping cough, and all that difficult class of diseases about which his whole book has been written, and in the management of which, according to the testimony of our reviewer, "the practical results are indeed most encouraging." And these, and such as these, are precisely the declarations and admissions of such men as Bennett and Scott, of Edinburgh, of Mackness, and Cotton, and Alison, and Hastings, of London, and more than fifty others, eminent in the profession, in Europe and in this country, who have published to the world their experience in topical medication, and, as Dr. Watson declares of himself, have by their "trials fully confirmed my statements of the efficacy of the treatment referred to." What a pity, Mr. Editor, that the "many who would have been tempted to put the method into practice" but for "the uncandid statements and unscientific descriptions contained in these essays;" what pity, I say, that these, and the reviewer himself, "were thus deterred from examining them, and inspired with a disrelish for the whole matter." Had they been less fastidious, they perhaps might have "acquired a *clientelle*," and have accomplished some of the good of which Dr. Watson and many other distinguished medical men, who were differently "inspired," have been the acknowledged authors.

As the remarks contained in the remainder of the reviewer's

* Monthly Journal of the Medical Sciences, Dec., 1849, p. 1290.

article refer principally to the views and statements embraced in my paper on catheterism of the air-passages, I have on these remarks no comments to offer. The question, however, has occurred to myself, and to many others—How happens it that my writings all have received such unqualified condemnation by the reviewers of *Philadelphia*? While these same essays have been reviewed in almost every leading medical journal in Europe—quite elaborately in some of them, and so far as I have been able to learn, have received, without a single exception, the approbation of the conductors of these journals, and in many instances their high commendation.

HORACE GREEN.

Annual Report of the Blackwell's Island Hospital.

This report is well worthy of a careful study by the physician, the philanthropist, and the practical economist. It is exceedingly creditable to Dr. Sanger, the Resident Physician, by whose efficiency and energy many important improvements in the institutions under his charge have been secured, the ratio of mortality as compared with former years notably diminished, and the comparative expenses reduced.

The whole number under treatment in the various Hospitals during the past year is 10,673.

The whole number of deaths is 539.

IN THE PENITENTIARY HOSPITAL.		
Whole Number.	Deaths.	Rates of Mortality.
4,058	144	3 3-10 per cent.
IN THE SMALL POX HOSPITAL.		
210	40	14 7-10 per cent.
IN THE ALMS HOUSE.		
4,724	288	4 7-10 per cent.
IN THE WORK HOUSE.		
1,681	67	4 1-3 per cent.

It will thus be seen that these hospitals offer an immense field for medical study and investigation, and should contribute largely to the advancement of science. If our limits permitted, we would gladly analyze the report with reference to its medical aspects. But we wish now particularly to call attention to the following extract:—

“The mistake in calling this a Penitentiary Hospital will be shown by table ‘C.’ The proportion of court prisoners to the whole number of patients is only 11 per cent., and the proportion of days that

court prisoners were under treatment is $7\frac{3}{10}$ per cent. Is it not wrong to heap additional disgrace on these poor creatures, by compelling them to be committed to a penitentiary, before they can reach an hospital, to be treated for their several diseases? Can reformation be expected when additional odium is cast on beings already too miserable, by committing them to a penitentiary, the abode of thieves, felons, and murderers, giving them the choice of becoming inmates of such a place, or dying in the streets, cellars, or gutters of the worst portions of our city? Of course they will take the former choice, and let me ask if a more certain method of converting the remaining 89 per cent. into thieves, burglars, pick-pockets, or murderers, could be devised? Is it necessary, or must it be, that human beings, laboring under the effects of drink, syphilis, ulcers, and all other diseases, shall, while being medically treated, also go through the process of being made into thieves, to prey on the community when discharged. A reference to table 'I' will show, that of the whole number admitted during the year, the large proportions of 1687, or nearly one-half, were admitted for the first time."

We ask now, if this is not a burning disgrace to a civilized and a Christian community? A poor woman, without crime or fault on her own part, contracts from her drunken vagabond husband syphilis. She can be received into no other hospital in this city for treatment, but must get herself committed as a vagrant to enter the Penitentiary Hospital. *Eleven per cent. only of the patients are court prisoners.* A young mechanic, in the main steady and industrious, supporting by his labor his young family, is induced by his companions to join them in a frolic. Excited and crazed by liquor, he has connection with a prostitute and contracts disease. Ashamed and humbled, he is ready to pay anything within his means to obtain a cure. He naturally falls into the hands of some quack who advertises to cure secret diseases, and after expending every cent that he can raise, and finding himself only the worse for the treatment he has received, he is compelled to seek admission to the Penitentiary Hospital in the only way possible, by being committed. His poor family are left to starve, or oftentimes to do worse. When he comes out of the Hospital, where he has been associated "with thieves, felons, and murderers," his self-respect is gone, and he cannot again obtain respectable employment, for he has been in the Penitentiary. Now who is responsible for this man's ruin, and the ruin of his family? Is it not the Ten Governors, who have the power of changing all this? There cannot be the slightest possible objection urged against the change, and if this is not speedily done, public opinion will speak trumpet-toned through

the press and condemn to the disgrace of bringing ruin and shame where they should have afforded relief and support.

We have only room for the following additional extract :

Your Honorable Board conferred a great favor on these Hospitals, last October, by appointing the following named medical gentlemen Consulting Physicians and Surgeons, in addition to the former Medical Board, viz : Francis U. Johnson, M.D., Alonzo Clark, M.D., B. Fordyce Barker, M.D., Consulting Physicians ; and Willard Parker, M.D., George W. Wilkes, M.D., James R. Wood, M.D., Charles E. Isaacs, M.D., Consulting Surgeons. These gentlemen have entered on their duties, and have already proved of great service to the institutions.

To the Medical Staff of the Blackwell's Island Hospitals, Doctors Thomas, Terry, Baylies, Henriquez, Finn, Jewett, Franklin, Studdiford, and De Forrest, I am under obligations for their strict attention to their duties, and an intelligent and hearty coöperation at all times and under all circumstances. The Medical Staff deserve your thanks.

¶¶¶

PART IV.—CHRONICLE OF MEDICAL PROGRESS.

[Translations from the German, under this head, are made by Dr. H. N. Bennett.]

Inflammation and Ulceration of the Cervix Uteri.

It has been our intention to give our readers a thorough review of the "Enquiry into the Pathological Importance of Ulceration of the Os Uteri, being the Croonian Lectures for the year 1854, by Charles West, M. D., &c"—as soon as we could find the requisite time. The hold which Dr. West has obtained on the medical public by his excellent lectures on the Diseases of Children, gives these lectures an importance which they never would have secured from their intrinsic merits. We do not regard them as adding anything to the present state of science, but, on the contrary, as calculated to do great harm to the practical advancement of uterine pathology and therapeutics. They are really nothing more than the adroit special pleadings of a partisan, made so by association. It is apparent from these lectures that Dr. West is identified with those whose interests would be damaged if certain doctrines, which we, from a not limited experience, (certainly many fold greater than that claimed by Dr. West for himself,) believe to be greatly in advance of those which he so ably advocates. But in the Western Journal of Medicine and Surgery, we find three lectures by "Henry Miller, M. D., Professor

of Obstetric Medicine in the Medical Department of the University of Louisville," from which we make the following liberal extracts, and which will probably prove more acceptable to our readers than anything from our own pen.

B. F. B.

"When Dr. West speaks of those ulcerations as of such weighty moment, in the estimation of some, he does injustice to the opinion of those with whom he differs, for I will venture to affirm, that no writer on the subject can be referred to who attaches any pathological value to these superficial abrasions, apart from the inflammation of which they are merely the effects. They are the product, but not the invariable sequence, of inflammation. Inflammation may exist, and that too in great intensity, without ulcerations, and whether ulceration attend or not, is of trivial importance, as it demands little or no special treatment, and does not materially add to the gravity of the symptoms. The essential disease is *inflammation*, and it is unfortunate, I think, that the accompanying lesion of structure, which may or may not attend, has attracted notice beyond its deserts, seeing that it is calculated needlessly to alarm patients thus afflicted, and and has been the occasion of unprofitable verbal disputes.

"In the introduction to his lectures, Dr. West does full justice to the doctrine he is combating, by coupling inflammation with ulceration, but as he proceeds and gives a description of the ulceration, he is guilty of unfairness in alleging that it is ulceration only which is the *summum malum* of those whom he is opposing; and here commences his mighty effort, which is continued with unabated force throughout his lectures, to depreciate and ridicule these ulcerations, by such expressions as the following—'seemingly trivial ulceration of the os uteri,' 'some slight abrasion of the mucous membrane covering this part,' 'trifling abrasion or ulceration of the os uteri,' as if those whose views he is controverting, verily believed that a lesion, of no greater consequence than a pin scratch, can mar the functions of the entire sexual apparatus, and project its malign influence to distant organs in sympathy with it.

"It is this resort to an equivoke, using the term 'ulceration' as an equivalent for inflammation and ulceration, but expecting the reader to understand by it nothing more than an insignificant abrasion, which gives to Dr. West an unfair advantage in the argument—a logical trick, which he practices throughout his lectures, and is well calculated to bewilder his reader.

"Having described the morbid appearances of the os uteri, when

brought under ocular examination by the speculum, and referred to their paramount importance in uterine pathology, in the estimation of some, Dr. West proceeds to propound the question which he has undertaken to discuss, viz.—‘ Whether ulceration of the os uteri is to be regarded as the first in a train of processes which are the direct or indirect occasion of by far the greater number of the ailments of the generative system ; or whether, on the other hand, it is to be considered as a condition of slight pathological importance, and of small semiological value—a casual concomitant, perhaps, of many disorders of the womb, but of itself giving rise to few symptoms, and rarely calling for special treatment ?’

“ Here I beg you to observe that the trick, the equivoke, which has been exposed, is had recourse to in the very statement of the question to be discussed. If by “ulceration” of the os uteri Dr. West means a trifling abrasion, independent of precursory and accompanying inflammation, all argumentation is precluded, for it would be a waste of time to combat such a spectre—such a mere pathological ghost. Inflammation, I repeat it, is the essential disease, and ulceration is but an accident of no pathological or therapeutical value.”

Professor Miller proceeds next to notice Dr. West’s allegations, and gives a quotation from his lecture, wherein he would have his readers believe that his opponents attribute all the varied disorders of the uterine functions, to inflammation and ulceration of the cervix, which “small portion of the womb,” as Dr. West sneeringly calls it, Professor Miller in another part of his lecture successsfully assigns to its proper rank in the sexual economy, and thus exposes another of Dr. West’s tricks.

The evidence by which to try the truth of the doctrine he has arraigned, Dr. West arranges under four heads, which Professor Miller gives in full, but which we state in brief, as follows :

In the first place, the healthy uterus considered anatomically and physiologically.

In the second place, the uterus considered autopsically.

In the third place, ulceration of the os uteri unconnected with disease, as it exists in the procident uterus.

In the fourth place, ulceration of the os uteri, considered in every point of view, as it ordinarily comes under notice, together with the treatment.

Upon this ground work of Dr. West’s labors, Professor Miller

follows up his arguments, combating successfully Dr. West's deductions from his first proposition, by giving correct anatomical and physiological views of the cervix uteri; considering it individually in its structure, functions, and nervous endowments, and comparatively, upon the same points, with the body. He draws no hasty conclusion, but brings up every point to full view, supporting himself by the highest English and French authority.

Professor Miller next takes up Dr. West in his second argument, which is deduced from morbid anatomy, the result of post mortem investigations. Dr. West in considering this part of his subject, gives his *extensive* observations amounting to sixty-two cases. The result of the examination of these cases, Dr. West gives in tabular form, as follows :

Showing the chief results of the examination of sixty-two uteri—

Uterus healthy in,	-	-	-	-	-	-	-	-	33
“ diseased in,	-	-	-	-	-	-	-	-	29
									<hr/>
Ulceration of os uteri in,	-	-	-	-	-	-	-	-	17
“ existed alone in,	-	-	-	-	-	-	-	-	11
“ with diseased lining of uterus,	-	-	-	-	-	-	-	-	3
“ with induration of walls of uterus in,	-	-	-	-	-	-	-	-	3—17
Induration of walls of uterus without ulceration of os,	-	-	-	-	-	-	-	-	5
Disease of lining of uterus, without ulceration of os,	-	-	-	-	-	-	-	-	7—29

Professor Miller, in following up Dr. West in his philosophical reasoning upon these results, wherein he concludes that the frequency of the occurrence of ulceration, “instead of substantiating the opinion that they are of great importance, rather militates against that supposition,” quotes Dr. Robert Lee, another equally strong opponent to the modern doctrine and the use of the speculum.

Dr. Lee, in a paper read before the Royal and Medical Chirurgical Society, May 28th, 1850, produced the testimony and observations of Dr. Boyd and Dr. Allen, of St. Marylebone Infirmary, and Messrs. Hewitt, Pollock and Gray, at different times, Curators of the Museum of St. George's Hospital. Dr. Boyd, among seven hundred and eighty-eight uteri examined, failed to find a single instance of ulceration of the os. Dr. Allen, of one thousand cases, observed not more than twenty examples of ulceration of the os of any kind. Of the one thousand and eighty uteri examined at St. George's Hospital, but three cases of ulceration were observed, and three by Mr. Gray out of one hundred and eighty cases which came under his notice. Here is a discrepancy of autopsic testimony, which Professor Miller aptly observes “neutralizes itself by its contradictions, and therefore in all fairness should be rejected.”

Professor Miller proceeds to take up Dr. West's third division, and, although not considering the abrasions and ulcerations of the procident uterus as properly connected with the subject, still refutes Dr. West's ideas and arguments, and enters upon the consideration of Dr. West's fourth and last proposition or division.

"His second assumption demands that the symptoms of ulceration of the os uteri shall be characteristic and differ materially from those of all other uterine ailments—a hard requisition, and one with which it may not be possible for the symptoms of any uterine disease to comply. There is not a disease of the uterus, whether it be inflammation of the body or neck, polypus, fibrous tumor, or even cancer, prolapsus, inversion, anteversion, or retroversion, which is always accompanied with characteristic symptoms, such as serve to diagnose it without physical examination. Dr. Simsom, the renowned Professor of Midwifery in the University of Edinburgh, in his 'Contributions to the Pathology and Treatment of Diseases of Uterus,' lays it down as his first proposition, that, 'the general and local functional symptoms of disease of the uterus are such as enable us to localize, without enabling us to specialize, the exact affection of the organ.' He illustrates and establishes the truth of this proposition, which does but embody the experience of all men and all time, by referring to the dissimilar effects of pregnancy, in different cases, and to the different phenomena of uterine disease, excited by the same specific affection of the organ, while, on the contrary, 'the same specific phenomena frequently result from affections of the organ, that are entirely at variance with each other, in their pathological character, in their course, and in their treatment.'"

To instance some of these diseases. Scirrhus degeneration of the cervix uteri sometimes gives rise, at an early period of its progress, to severe pains in the uterine region and marked constitutional derangements. In other cases, which have come under my own observation, it pursues its course without pain, and with such slight disorder of the uterine functions, including, as Dr. West would say, the highest, as to escape the notice of patient and physician, until its destructive ravages are well nigh completed. "While," as Professor Simsom remarks, "we thus not unfrequently find the most malignant organic diseases of the uterus more or less latent or masked in their symptoms, we have, on the other hand, sometimes the most severe local and constitutional symptoms of uterine disease developed in instances of slight and remediable organic affections of the part, as in cases of simple ulceration and granular inflammation of

the cervix ; and these symptoms may be all present in their most aggravated forms for months, and even for years, when the local examination and final result show us that there is no organic disease whatever as in cases of 'irritable uterus' or hysteralgia. Indeed, in some females we have all these symptoms strongly but temporarily excited at every recurrence of the catamenial discharge, in connection merely with that congestive and increased vital activity of the organ which accompanies its natural menstrual secretion."

There is a certain group of sufficiently well-defined symptoms, such as *pain in the sacral, pubic, or iliac regions*, mostly dull, but occasionally acute and paroxysmal, like parturient pains ; *heat or burning* in these same regions ; *sense of fullness and weight* within the pelvis ; *bearing down* ; *hæmorrhagic and leucorrhæal discharges* ; *deranged menstruation* ; *painful coition* ; and *frequently recurring abortion*—which point plainly enough to the uterus as the seat of disease of some kind, but none of them nor all of them, in any combination, infallibly indicates the special morbid affection, which may only be revealed by physical exploration.

But although the terms of its admission into the nosological nomenclature are hard and unreasonable, it may safely be affirmed that inflammation and ulceration of the cervix can approximate more nearly to them than any other uterine affection, its symptoms being better marked, and sometimes, indeed, quite pathognomic, as will be presently shown.

From these considerations, it undeniably follows that to require inflammation of the cervix to exhibit, as its credentials peculiar and sharply defined symptoms, such as are not observed in any other uterine disease, or submit to be expunged from the record of this class of maladies, is an infringement of its rights, against which those charged with protecting them are bound to protest.

We are justified by every principle of sound reasoning in maintaining that if other lesions may derange the uterine function and affect the general health, so may it, and that, if no other lesion can be detected, after the most sedulous examination, to ignore it or estimate it as nothing is a violation alike of sound philosophy and common sense.

When we are led by suspicious symptoms to investigate the condition of the uterus, it is often found that the neck is in a state of chronic inflammation, and no other disease whatever can be discovered, after the most careful and thorough examination. It stands revealed by the speculum in all the vividness and isolation of an

ophthalmia, and in connection with it, some of the symptoms of the uterine category are developed. Notwithstanding that the symptoms themselves may be insufficient to point out this precise local disease, they do nevertheless harmonize with it, and are such as may be more rationally attributed to it than to any other cause or to no cause at all. To illustrate this remark, and at the same time to impress you with the pathological importance of such an affection, though seemingly small, I will offer an admirable description of one form of the malady, by the pen of a writer who had evidently often seen it, and diligently studied it. The special form of the affection is chronic inflammation of the *mucous membrane* lining the interior of the neck, and the writer is M. Melier, in a memoir, entitled, "Considerations Pratiques sur le Traitement des Maladies de la Matrice." Inflammation thus seated is regarded by M. Melier as a veritable catarrh of the part, extending in some cases into the body of the uterus, and is of very common occurrence. The influence which it exercises over the development of other maladies, and its ulterior consequences, have not, he thinks, been justly appreciated. It may easily be discovered by the speculum, but eludes our investigation by the touch alone. Thus examined, the orifice is perceived to be more or less red, the mucous membrane extending into its cavity appears turned ; thick, viscid, gluey, white mucus, more or less colored, and sometimes sanguinolent, is seen flowing or rather adhering, and obstructs the cervical canal, from which it can scarcely be removed by a mop. The orifice itself may be observed in two different states ; it may be extremely contracted or very patulous and infundibuliform, from the swelling of its borders. The neck is sometimes tumefied, uneven, and indurated ; in other cases it preserves its normal consistence and volume. Melier adds that he knows not how far the malady is limited to the neck, but it is probable that it most frequently extends to the body of the uterus. The patient complains habitually of a dull, deep-seated pain, sometimes of acute suffering, heat and pruritus behind the pubes, which she indicates as the seat of the malady. Changing their ordinary character, these pains may become more violent and resemble those of labor, and after a longer or shorter time, their sudden cessation is announced by a more abundant discharge than is usually present. The menses, more or less painful, are glairy from the admixture of mucus ; coition is painful.

Furthermore, the cervical inflammation is represented by M. Melier as being very chronic, and in its course, in a longer or shorter time, a new pain is complained of in the inguinal or ovarian regions, indicat-

ing a tendency to propagation of disease to one or both ovaria. These organs may become involved, and then a tumor is discovered in one or both sides, and the pain becomes more acute and persistent. The neck is primarily affected, and for a time suffers alone. Subsequently, and by the sympathy of continuity, the ovaria participate in its sufferings and take on inflammatory action, which may result in degeneration of their tissues or hypertrophic enlargement. Interrogate the patients," says M. Melier; "and go back to the very beginning; they will tell you that the malady commenced in the hypogastrium, behind the pubes, and extended consecutively to the ilia."

Having thus established inflammation and ulceration of the cervix uteri nosologically, and pointed out the defects in the premises of Dr. West, Professor Miller follows him up in his "comparison between the two classes he is pleased to divide all uterine diseases, namely, those in which there is, and those in which there is not, ulceration of the mouth of the womb." The data from which Dr. West grounds his different conclusions are 1226 cases of uterine disease, out of which he found it necessary to employ the speculum for a correct diagnosis in 268 cases only. Of the number thus examined, he found ulceration existing in only 125 cases. Professor Miller compares these researches with those of Dr. Bennett, who ranks among the highest and most reliable authorities. Of 300 cases analyzed by Dr. Bennett, he found decided inflammation existing in 243 cases.

From this condensed statement of the reply of Dr. West to the question, it will be perceived that he has a very exalted opinion of the efficacy of rest, and of abstinence from whatever is calculated to aggravate uterine inflammation, in which I entirely concur. But are these measures curative? and will chronic inflammation of the cervix yield to hygienic treatment alone? None but a neophyte would venture to answer these questions affirmatively, and my own observation authorizes me to declare the inadequacy and consequent inefficacy of such measures. They are beneficial as adjuvants, but impotent as remedies. Many patients have come under my observation who had thoroughly tested such treatment under the direction of other practitioners, and had vaginal injections to boot, who nevertheless were not cured. But it will be observed that if Dr. West's appreciation of 'simples' is very high, his estimate of cauterization is proportionably low, and none of his assertions or perversions, I confess, has surprised me more than his brief allusion to the nitrate of silver as a topical remedy.

The efficacy of this kind of medication in kindred, I might say, identical affections of other mucous membranes, is so well established, that a lecturer before a learned society ought not to have called it in question, respecting uterine inflammation, unless he had proof that the genital mucous membrane is unlike all others of its class. It is true that he does not exactly say that the nitrate is inert *per se*, but the surface of the os is shielded from its causticity by a layer of albuminous mucus, a wise precaution, it may be, of nature, foreseeing that there would be womb-burners in the last days.

Unfortunately for Dr. West's theory, however, but fortunately for the womb, this albuminous shield is rudely assaulted by every cauterizer, with a formidable weapon, called by his Gallic neighbors *plumas-seau de charpié*, of which he may have heard, which brushes it aside *an'twere any cobweb*, and exposes the naked surface to the contact of the nitrate crayon. There can be no doubt that the uterus may be cauterized more perfectly than the tonsils or fauces, and more readily than the larynx, and certainly no reason can be imagined why the remedy should not be as efficacious when applied to it as to them. What analogy suggests, experience has abundantly confirmed, for if it be true that these cases, after having resisted the best-directed hygienic measures, have yielded, not once, but in hundreds of instances, to cauterization, what other or stronger evidence can we obtain in favor of any remedy?

Valuable as cauterization is, however, in the treatment of inflammation of the cervix uteri, it is not the only topical remedy employed in such cases, nor is the nitrate of silver the only caustic that may be advantageously applied. The abstraction of blood directly from the affected part, by leeches or scarification, is often useful, and may sometimes supersede cauterization, while the most beneficial results may often be obtained by medical applications that are not caustic in their operation. Still cauterization is applicable to so many cases; where depletion is not indicated, and is so often preferable to other local medication, that we need not hesitate to admit that it is the prominent and distinctive feature of our treatment.

While Dr. West denounces cauterization with nitrate of silver as nugatory, or simply superfluous, he thinks it would not be right to leave unnoticed other cases, in which, the neck of the womb being more or less enlarged, stronger agents are employed. The stronger agent referred to is the caustic potash, which he summarily condemns on account of the pain it produces, and the risk of subsequent inflammation of the uterus and its appendages. I have often used this arti-

cle, or its equivalent, the *potassa cum calce*, in the treatment of such cases, and may, therefore, presume to know something about its immediate and remote effects. All my own observation is contradictory to the assertions of Dr. West, both in regard to the pain and the danger of the remedy. On the first point, Dr. West may speak for himself, the rather as it will plainly appear that he contradicts in this place what he affirmed in his first "lecture." "If the caustic be introduced, as is usually done, within the cervical canal, it is allowed that the pain produced, and which sometimes lasts two or three days, is very intense, causing nausea or sickness, and sometimes even syncope, or occasioning extreme depression, prostrating a patient so completely as to render her unable to quit her bed or sofa for several days."

Compare this statement with what was asserted in his first lecture touching the insensibility of the neck. "The cervical canal has been forcibly dilated, it has been incised ; the tissue of the cervix has been burnt with the strongest caustics, or with the actual cautery, or portions of it have been removed by the knife, generally with no injurious consequences ; often with so slight a degree of constitutional disturbance, or even of local suffering, as to surprise those who advocate, little less than those who condemn, such proceedings."

But I am afraid that if Dr. West's consistency may be called in question, his accuracy in representing the practice of others is not unimpeachable. It is not true that the caustic potash is usually introduced into the cervical canal ; far more frequently it is applied to the exterior of the neck, in cases of enlargement and induration, and there only to a small part of its superficies for the purpose of forming an issue, precisely as an issue is formed upon any part of the skin. The suppurative inflammation that detaches the eschar is followed by purulent discharge, under the influence of which the morbid tissue softens and returns gradually to its healthy condition, while the body of the womb, if implicated, is ameliorated by the counter irritation established in the neck. In those comparatively rare cases in which it may become necessary to introduce this powerful agent into the cervical canal (and I have met with such), it is never with a view to produce an eschar, but to make a somewhat more powerful impression than the nitrate of silver can, or at most to cauterize very superficially. In the former case, the caustic is held in contact with the neck six or eight minutes ; in the latter, not more than as many seconds. Such at least is the procedure of Dr. West's criticisms, and who, I may add, is the embodiment of the doctrine and practice he is

trying to eradicate. On this point, Dr. Bennett says, 'When applying potassa fusa, or potassa cum calce, to the cavity of the neck of the uterus, I never leave it in contact with the diseased surface more than a few seconds, as the object is not to create a slough, but profoundly to modify its vitality. I generally use the smallest cylinder, which, from its size, moves freely in the enlarged cavity, only applying it where there is evident morbid dilatation; and never beyond half or three-quarters of an inch in depth, even where the disease appears to penetrate farther'."

On the Ulcerations upon the Frenum Linguae in Hooping Cough.

By ALESSANDRO GAMBIRRINI, of Mailand.

Upon this symptom which had been already seen by Zitterland, Braum, and Brück, and was afterward mentioned anew by Lersch, the author has made the following observations: 1. These ulcers were found in the majority of cases of hooping cough; nevertheless they are not constant, and were wanting even in very violent cases of this disease at its height. 2. The ulcer was rarely round, but exhibited almost always a direction obliquely intersecting the long axis of the frenum. 3. It always consists from the commencement in a solution of continuity. 4. It had its seat both beneath the frenum itself, and upon the inferior surface of the tongue in the proximity of the same. Also in the latter case, which was rarely observed, it appeared to have had the same beginning. A vesicle in the neighborhood of the frenum, which burst and thus first gave origin to an ulcer with a lardaceous base, as Zitterland claims to have seen, was never observed.

In the paper of Lersch a similarity between hooping cough and hydrophobia is alluded to, and reference made to the discovery in relation to the vesicles of Marochetti, as a support of this view; the author, however, maintains a different opinion concerning the manner of origin of the sublingual ulcers in hooping cough. He ascribes the protrusion of the tongue in violent cases of hooping cough to spasm, which not only affects the muscles of the larynx and throat, but also those of the tongue. Hereby the tongue becomes not only protruded, but also curved with the point downward, the frenulum pressed upon the superior border of the lower incisor teeth, drawn over them, and in this manner contused. The latter so much the more the stronger the attack, the more violent the spasm, and the sharper the edge of

the teeth, which is especially observed in early childhood. This cause would also account for the transverse direction of the ulcer, as well as the commencement of the latter as a solution of continuity, independent of a preceding phlycten or pustule. With less violence of the muscular spasm the tongue would not be protruded out of the mouth, and then the ulcer might arise at a point situated anterior to the attachment of the tongue at the base of the buccal cavity.

The author cites examples which serve as proofs of his method of explanation. He has observed patients, in whom, instead of the convulsive protrusion of the tongue, a convulsive retraction of it took place ; in these the ulcer was wanting, although the teeth were in a perfectly normal condition. In a child of six years, whose lower row of teeth was oblique so that the left side stood higher than the right, and the highest point of the former formed by the eye-tooth, an ulcer corresponded to this point, upon the inferior surface of the tongue laterally from the frenum. Another child, in which, when the whooping cough commenced one of the middle inferior incisor teeth was wanting, and the other so loose that it fell out after a few days, exhibited no ulcer, although the tongue was much protruded and the frenum perfectly developed. The same occurred in another under very similar circumstances. Neither was an ulcer to be discovered in a case where between the two central inferior incisor teeth an abnormal space existed in which the frenum might enter during protrusion of the tongue. The absence of the frenum, which sometimes occurs, appears to be unfavorable to the origin of the ulcer, and the author saw a case run its course without the ulceration ; but since partly the degree of the convulsive traction of the tongue, partly the structure of the inferior arc of teeth differs, so also such cases exhibit this phenomenon in spite of the absence of the frenum.

It is said, in the paper by Lersch, that with the decline of the disease, the ulcer, the base of which is lardaceous, becomes clean, diminishes and disappears. The author re-affirms this observation, and adds, also, that cicatrization may occur although the peculiar ringing inspiration, which is a characteristic sign of whooping cough, may still continue, and the paroxysms of coughing still be accompanied with vomiting. If now the continuation of these two symptoms, notwithstanding the disappearance of the ulcer, on the one hand appears to strengthen the conjecture of the author concerning the origin of the latter, so he thinks on the other hand to find in this very circumstance a confirmation of the opinion that these symptoms are less characteristic of whooping cough than the spasm of the lingual

muscles, the diminution of which upon the decline of the disease is manifested by the disappearance of the ulcer. This assertion is also supported by the observation of Blaud, who found that the ringing inspirations, as well as the forcible expirations, were less important in number and strength in later periods of life, than in children. Furthermore, common bronchitis of some severity may produce the very same so-called barking, and in irritable persons even vomiting, so that these two symptoms cannot constitute the essence of whooping cough. The author has likewise examined the sublingual region in other varieties of cough, but never found a similar ulceration, and thence he concludes that although with a severe cough a convulsive impulse to protrude the tongue may exist, yet it is not sufficiently strong to wound the frenum pressed against the teeth as in whooping cough, and also that the violence of these convulsions is the characteristic of the latter disease. The correctness of this conclusion, however, can only be proven, when the ulcer is found wanting in a sufficient number of cases of whooping cough in children whose teeth are not yet developed. The author has witnessed but one case in a child of this age since he entertained his present views, and in this the ulcer was wanting. It is necessary also that this ulcer be not confounded with the aphthous ulcer of children.—*Schmidt's Jahrbücher*.

PART VI.—EDITORIAL AND MISCELLANEOUS.

NEW YORK MEDICAL COLLEGE.—The trustees of this institution have made some alterations in the Faculty. Dr. Henry G. Cox, of this city has been elected Professor of Theory and Practice and Clinical Medicine. Dr. Horace Green becomes Emeritus Professor of Theory and Practice, but will continue to be the President of the Faculty, and to lecture on diseases of the air passages. Dr. Peaslee and Dr. Parker exchange chairs, the former taking physiology and pathology, and the latter anatomy.

The amount of the change is, then, the addition of Dr. Cox to the Faculty. Of this gentleman too much can hardly be said. An estimable man, an experienced practitioner, and a most agreeable and practiced lecturer, his presence would strengthen any Faculty, and especially in this city, where he has long resided and is thoroughly known. His position as President of the Medical Board of the Emigrants' Hospital will also enable him to illustrate his lectures by the abundant resources of that institution.

PERSONAL.—Our remarks in the March No., upon the *censors* appointed by the State Medical Society, to attend examination of candidates, having been misconstrued, it is proper to state that they were intended to be applied to the *manner* in which they (the censors) were appointed (by open nomination during the hurry and confusion attendant upon the last moments of the meeting); and not to the *individuals* so appointed, many of whom, as is well known, are among our personal friends. The regularly elected censors of the Southern District were, of course, not intended. We are in favor of rigid examinations, and consider that the possession of a good moral character should, *especially*, be insisted on; which is known not to be the case under the present system.

J. G. A.

—*N. Y. Med. Times, April, 1855.*

By reference to the Transactions of the State Medical Society, it will be seen that the censors were *not* “appointed by open nomination, during the hurry and confusion attendant upon the last moments of the meeting.” It is said some people should have good memories. We are inclined to think that the gentlemen composing the Board of Censors will regard the charge of being personal friends of J. G. A. as a greater imputation than the sneer at their qualifications, in the former number of the Times. The suggestion that “the possession of a good moral character should especially be insisted on” is a good one. It is a pity that it had not been adopted some years ago, and then some who now *nominally* belong to the profession would have been kept out of it. For although few medical students have either the means or the inclination to assume the protectorate of a blasé opera singer, yet a character for “truth and veracity” is generally considered an essential component of a “good moral character.”

CORRECTION.—We are requested to correct a statement in the Medical Times, that Dr. Rudd, one of the resident physicians at Ward’s Island, died of typhus fever. No one of the resident physicians at Ward’s Island has died of typhus fever since 1852; neither has there been any one of this name who has held the situation of resident physician there.

There are several other misstatements in the same journal, which we may feel called upon to notice at some future time.

COMPLIMENTARY.—The medical class of the University of Buffalo have passed resolutions highly complimentary to Professors White and Hunt. From the former they requested permission to have a lithographic likeness taken as a “memento of so faithful and efficient a teacher,” and “the first instructor in obstetrics in the United States who has adopted the demonstrative mode of teaching in that department.” The students of the New York Medical College presented Professor Barker with a very handsome speculum chair. || ||

ITEMS.

Miss Elizabeth Pratt, of Boston, recently deceased, has bequeathed *twenty thousand dollars* to the Massachusetts General Hospital, for the hospital proper in Allen street, and the McLean Asylum in Somerville.

Dr. E. R. Peaslee has again (Feb. 12) successfully performed the operation of ovariectomy, the patient being an unmarried lady, twenty-four years of age. There was ascites as well as ovarian disease; and one hundred pounds of dropsical fluid was removed before the operation for the removal of the tumor, which weighed twenty pounds. A report of this case will appear in a future number of the *Monthly*.

A correspondent of the *Journal of Commerce* states that a young physician from New York arrived at Berlin recently, with his diploma as a graduate of the Crosby street Medical College. It was his intention to proceed to St. Petersburg, and there offer his services as a surgeon in the Russian army. But on learning from the Legation there that such a course would not be necessary, he presented his credentials to the military representative of the Emperor, and was immediately accepted, and sent off the next afternoon for the Crimea. His expenses of travel are to be paid to and from the place of his destination, and a moderate compensation is to be made for his services.

There is a Society in Amherst College, Massachusetts, whose members are pledged against the use of ardent spirits, opium, and tobacco. Eleven hundred and sixty of the students have, from time to time, taken the pledge. The total number of graduates of that College is one thousand and ninety-four.

HORSE-FLESH AS FOOD—M. Geoffroy Saint-Hilaire, Professor at the Museum of Natural History, has just delivered two lectures on the advantages of bringing horse-flesh into use as food. There is no reason, he declares, why horse-flesh should not be eaten like the ox and the sheep; the horse is herbivorous, and no deleterious element enters into its food or structure. Its flesh, beside, is full of azote. The ancient Germans and Scandinavians had a marked liking for horse-flesh. They preserved a certain race of white horses to be sacrificed to Odin, and after the sacrifice they boiled the flesh and feasted on it. The introduction of Christianity put an end to this custom, and probably led to the aversion to horse-flesh which is now generally manifested in Europe. The nomadic tribes of Northern Asia make horse-flesh their favorite food, though they have numerous flocks of oxen and sheep. In spite of the dislike of horse-flesh in modern Europe, the Danes have recommenced the use of it. During the siege of Copenhagen, in 1807, the Government formally authorized the sale of it in butchers' shops, and since then it has been constantly sold; there is, even in that city, a privileged slaughter-house for horses placed under the surveillance of the Veterinary School—and horse-flesh is sold in it at the average price of 12 cents per pound. Parent Duchâtel, an esteemed writer, asserts that large quantities of horse-flesh were formerly introduced into Paris on different pretexts. Huzard, an eminent Veterinary Surgeon, states that in the scarcity which followed the Revolution of 1789, the greater part of the meat consumed at Paris for six months was horse-flesh, and that it caused no ill effect on the public health. The distinguished Army Surgeon, Baron Larrey, made his wounded patients eat horse-flesh in the campaigns of the Rhine, of Catalonia, and of the Maritime Alps, and he ascribes to it the cure of a great number of his sick in Egypt. From all these facts, and numerous others, M. Geoffroy Saint-Hilaire insisted that the horse, in addition to the services which it already renders to man, can be made to supply cheap and nutritious food.

DR. MANDT.—Dr. Mandt, homœopathic physician to the late Emperor, is said to have left Russia in great haste and secretly. He is reproached with having too long concealed from the august deceased that his lung was attacked; also with having himself prepared the medicines destined for the Emperor, instead of having had them prepared by a druggist. Great irritation was manifested against him at St. Petersburg, and the Emperor Alexander, himself, advised him, it is said, to leave Russia.

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THE AMERICAN MEDICAL MONTHLY.

JUNE, 1855.

PART I.—ESSAYS, MONOGRAPHS, AND CASES.

Clinical Lectures on Some of the Principal Diseases of the Eye.
Delivered at the New York Medical College, 1855. By
ISIDOR GLÜCK, M.D., Cor. Fellow of the Medical Society of
London.

GENTLEMEN: Having explained to you the manner in which objects are depicted on the retina by the way of refractions of the light-rays through the dioptic media of the eye, a process based on pure physical and optical laws, you will easily comprehend the possibility of an alteration in the formation or perception of such an image, founded on the insufficiency of accommodating the eye to various distances, or on the incompetency of appreciating the excitement produced on the retina. In the present, as well as in many other similar cases, which you have the opportunity of examining here, you perceive but a few objective symptoms—in fact, with the exception of the enlarged ciliary vessels, you scarcely observe by the naked eye any other morbid appearance, whereas the subjective symptoms concentrated in the weakness of sight the patient complains of, are certainly serious enough to attract the patient's and your attention.

In consequence of the impeded faculty of accommodating the sight to objects situated at various distances, the same may appear for a certain length of time as they really exist, but soon

they will appear confused, dull, as if covered with a mist. If, during writing, reading, or any other occupation requiring accommodation to closely situated objects, the exertion of seeing is continued, the eye becomes tired and painful, redness and lachrymal suffusion comes on.

Presbytic amblyopia, or kopiopia, develops itself in presbyopic persons by a continued exertion of the accommodative powers to fix near and small objects. In individuals from ten to fifteen years of age, it supervenes if the occupation is assiduous and fatiguing. It develops itself slowly ; at first, fatigue is felt in the eye, and want of accommodation is felt after a protracted occupation,—mostly, therefore, in the evening ; objects then cease to be seen for a moment. In the beginning the sight is reestablished if the work is removed to a longer distance ; subsequently the occupation has to be interrupted, momentarily, to regain the power of accommodating and fixing the objects. It is characteristic of this kind of kopiopia, often met with in literati, miniature painters, engravers, jewellers, watchmakers, painters, tailors, and seamstresses, that, in commencing the occupation, the patient sees perfectly well, and after a lapse of time is surprised by a dimness, called, commonly, blur ; the sight remains the longer clear, the shorter the time of occupation requiring the exertion, has been. If the affection develops itself more, the interval of clear sight is shorter ; and whereas cloudiness supervened at first after some hours' work, it may subsequently annoy even after a few minutes exertion. Convex glasses benefit this kind of weakness of sight, and allow the continuation of the occupation. If the occupation is continued without the use of glasses, the dimness and incapacity of accommodating increases, and recurs in so short an interval, that no occupation is longer possible ; the feebleness of sight becomes almost a permanent one, and may terminate with amaurosis. It is evident that in this seamstress protracted accommodation by steady sewing, in cloudy as well as in very bright days, and often at night by artificial gas light, causes the disturbance of sight complained of. Abstinence from all occupation requiring close accommodation, or at least to diminish the time of such, will be a chief indication. Many varieties, however, occur, of presbytic amblyopia ; in some of

which spectacles are of benefit, and in others they are useless, and often injurious.

Presbytic amblyopia may degenerate into acquired myopia, complicated with amblyopia.

Not seldom the focus of both eyes varies, and the one may be presbytic, whereas the other proves to be myopic. In similar instances the diameter of the pupil is in both eyes a different one. Dilatation of the pupil in the one, and comparative diminution in the other, will frequently be observed. Besides, the light acting on the retina immediately, and by its means on the sphincter iridis, the will itself influences both muscles, sphincter, and dilator, and many pathological conditions influence the dilatation or contraction of the pupil.

Considering the influence of light on the pupil, we observe its effect in the impressibility, sensation and motion. The degree of light is felt, together with pains or comfort, and the diameter varies. By the impressibility, and the sensation, the mind is forced to representations. The movements of the iris may, therefore, be either direct ones produced by the influence of light, or indirect ones, caused by the representation subsequently created. The diameter of the pupil depends upon the intensity of the light, or an illuminated body, and the extent of the retina acted upon. The magnitude, or size of the image formed on the retina, depends upon the magnitude of the angle of vision, which diminishes with the distance of the object, and with it diminishes also the size of the retinal image, consequently the extent also of the excited retinal surface. But if the excitement is produced on a more extensive surface of the retina, the influence which it may have on other nervous parts must increase. Those parts are the corp. quadrigemina, and the fibres of the iris, provided by the oculomotory nerve, proceeding therefrom. Therefore, with the greater distance of an illuminated body, will the effect upon the sphincter iridis proportionately diminish, that is to say, the contraction of the pupil and the dilatation, will result. When near objects are looked at, the pupils will contract, at the same time the eyes will turn inward, and dilate when the objects are removed to a greater distance. As we see only by the centre of the retina, we try to turn the eyes in such a way as to allow the objects looked

at to fall on the most sensitive spot, which is effected by turning them inward when near objects are fixed, and outward when distant ones are looked at.

The pupil contracts, therefore, by fixing near objects, and dilates by looking at distant ones,* for three reasons: 1. Because of the simultaneous movements inward, when fixing near objects: 2. Because of the contraction of the sphincter pupillæ that accompanies the accommodation. 3. Because of the relation between the size of the excited retinal surface and the intensity of the excitement produced on the oculomotory nerve.

The Influence of the Will on the Activity of the Iris.

DILATATION OF THE PUPIL.—Entering a perfectly dark room, complete obscurity prevails, and gradually it becomes lighter and lighter. Thus Boyle† observes, that a man enclosed during the reign of Charles I. in a dark cavern in a wall, without windows, began to observe, after a few weeks, some light, and subsequently could distinguish the parts of his bedstead, and ultimately even the mice, that came to carry the bread-crusts from his hole. In darkness a dilatation of the pupil takes place, and by it increases considerably the quantity of admitted rays of light. But if the dilatation of the pupil was dependent directly and only upon the darkness, it would not last so long as it does before we begin to see in the dark. On the contrary, we should have to see more in the beginning, because the darkness causes no pains, and if it was an excitement produced in the sympathetic nerve, it would be natural that the excitement should be the greatest in the first instance, and diminish subsequently. But any one observing himself in the dark, may notice and convince himself that in the dark the desire for seeing increases more and more, and with it the possibility of seeing. This desire must therefore be considered as the excitement forcing the central parts of the sympathetic nerve into activity.

A more instructive case, interesting in many points of view, compels me to abridge my remarks on this patient.

* In dogs the contrary takes place.

† Porterfield on the Eye.

The patient now before you offers, to her discomfort, a multitude of morbid symptoms, aggravated by painful subjective ones. The impression that intrudes upon the observer by the aspect of the head of this elderly woman, is certainly not calculated to hasten the observer to the examination of the eye, without eliciting previously some hints for the formation of the diagnosis from the eruptions marking the forehead, and announcing a constitutional disease of rather a suspicious nature. The candid confession of this unfortunate woman, whose husband, as she asserts, communicated to her some twelve years since a disease from which she has never been entirely free, will corroborate the opinion that even a less close observer must form by glancing at the eczema, which, with its papulæ and nodes on the different parts of the forehead and hairy scalp, presents so characteristic a specimen of a syphilitic eruption, of different secondary forms grouped together. Thus prejudiced in favor of a possible syphilitic complication, we may proceed to examine the organ of sight.

The more prominent symptoms concern the left eye, although the right one cannot be pronounced entirely free from morbid appearances.

An increased resistency, injection of the dilated ciliary vessels densely ramifying around the cornea, the dark blue appearance of the sclerotica in advanced age, and the small elevations in the ciliary region, produced by the dilated tortuous vessels of the choroid; the wide dilatation of the pupil, the immobility of the iris by the different degrees of light, the sea green discoloration of its background—the examination by the eye-speculum showing a brown unequally-diffused color, grayish-blue masses in the vitreous body, covering the entrance of the optic nerve, as well as some of the vessels, with a mist, whereas the ramifying arteries and veins visible by the movements of the eye in the different directions appear abnormally increased in their diameter, and the retina itself covered with grayish patches, more on the outer than the inner half, corresponding with the greater protuberances of the choroid coat—all these taken together form the objective symptoms. The entire and absolute want of impressibility of the retina, even by the strongest light, the appearances of light and different colors constantly

annoying the patient, the supra-orbital pain frequently recurring and lasting for hours, constitute the subjective symptoms of this disease, that eminently shows the affection of the choroid coat as well as of the retina and vitreous body.

The complication of morbid alterations in the different parts of the eye, leaves ample choice for designating this disease; and in fact it matters little whether you call this disease by a name denoting the immediate cause of the effect, (i. e., choroiditis,) or by such as denotes the result, as long as the pathological condition of the interested parts, and their physiological function, is regarded. The best way, however, seems to me to be to include in the designation both immediate cause and effect, and it might not be amiss to call it by the collective name of glaucoma, or amaurosis glaucomatosa, resulting from choroiditis. In order to justify such a designation, it will be necessary to enter at large into that process which goes on when a similar disease is forming itself.

The parts constituting the eye being dependent for nutrition on the general economy, and some of them, as the aqueous and vitreous humors, upon the tissues in the immediate vicinity, furnishing, by an endosmotic process, the necessary supplement for the used up and exosmotically released elements, may undergo a morbid alteration whenever a constitutional disease deteriorates or changes qualitatively or quantitatively the nutritive fluid, or a local one impedes the nutrition. In consequence of such an impeded nutrition of some parts, a more extensive disease may establish itself involving parts connected by continuity or contiguity. Bearing in mind the products of inflammation, it is hardly astonishing that the sole presence of such morbid new formation may exert an injurious effect by its mechanical pressure and organic transformation even upon such parts of the eye as are not in immediate apposition.

Choroiditis—Glaucoma.

Like other vascular organs the choroid coat is liable to be inflamed, and this inflammation may begin in the choroid coat and exist for some time as a mere local disease, or it exerts its

morbid influence on the whole organism. It is, however, mostly, as in this woman, a morbid expression of a constitutional disease. In this form of choroiditis increased injection and enlargement of the anterior ciliary vessels exists as in all other inflammations of the choroid coat. The mobility of the iris may be impeded or destroyed in some hours or days: in chronic cases of choroiditis it takes weeks, or, as in this instance, several months. Dilatation of the pupil, is one of the most frequent symptoms. Although it may be absent in the beginning of the disease, it soon follows. The dilatation is mostly, like this, irregular. Sometimes, however, neither the diameter nor the form of the pupil changes. The greenish discoloration may be absent in the commencement of the chronic choroiditis, or it may be covered by the dulness of the cornea, or by the discoloration of the aqueous humor. A greenish discoloration may, however, exist without a choroiditis.

The color of the background, seen through the dilated pupil, may vary very much, being dependent upon many circumstances. The larger the pupil the less dark appears its background; the more advanced in age the individual is, the more the background of the eye appears dull, gray, yellowish, or greenish. The aqueous humor, mixed with pigment, may cause a smoky discoloration in the background. Hæmatine transuded through the walls, together with blood serum solved in it, may show, according to its quantity, a yellowish or reddish appearance. But the most important change, causing discoloration, takes place in the posterior wall of the eyeball. In the normal eye the retina and choroid coat lay in the focus of its light-refracting media: the transparent retina and dark choroid coat form the screen; the cornea and the lens form, together with the enclosed aqueous humor, the objective lens of a camera obscura. Now if an exudation takes place between the retina and choroid, the retina, which at the same time loses its transparency, will advance, and thus be more or less removed from the focus of the cornea and the lens. The eye then ceases to be a well accommodated camera obscura. The quality and quantity of the exudation may influence the absorption and reflection of the rays of light. Coagulated fibrinous exudation changes the background of the eye to a white, or yellowish-

white crust, which reflects all the light, and gives it a peculiar appearance, as it has to return through the lens and the cornea. Beer's amaurotic cat eye belongs to this kind. Fluid exudations, as the serous, sero-albuminous, or fibro-serous ones, admit light to the choroid coat, and allow its return, through the more or less opaque retina, and vitreous body, and thus modify variously the appearance of the background. By the transparency of the fluid exudation, the choroid coat and its pigment must be considered, together with the quantity of blood. Even in the normal state, if the background is looked at through a dilated pupil, in a certain direction it appears reddish, how much more red may it appear when affected with choroiditis.

In glaucoma, as you see it here, the background appears sea or bottle green, of a peculiar dulness and opacity, which is situated deep behind the iris, and appears more intense in the direction of the light that falls in. If the nucleus of the lens is also opaque, the same appears also in a greenish light; but then the opacity is nearer to the iris, as generally in cataract, and is mostly, in the centre of it, deeply saturated.

Mackenzie, Canstatt and Sichel tried to explain the greenish tint from the mixture of yellowish and bluish rays of light, the yellowish ones coming from the lens, the bluish ones coming, according to their view, from the choroid coat. A yellowish lens, however, situated on a dark background, will in transmitted light appear greenish. It may be explained also in another way. The anterior ciliary vessels appear to us bluish, because their blood is covered by a transparent light membrane, the tunica vaginalis bulbi. The thinner the sclerotica is, by the fulness of the vessels constituting the choroid coat, as is the case in children, the bluer it appears. Now if a layer of exudation lays in front of the choroid coat, rich of blood, and before the more or less opaque light-colored retina, the same may, for the very same reason as the ciliary vessels do, reflect *blue* rays, which then passing through the yellowish lens, will appear dirty green. Opacity and discoloration, or change of color, must be distinguished from each other. The background of the eye may appear yellow, gray, reddish, discolored, and still be entirely clear. It is necessary that the media situated in front of the background be entirely clear, and

that the reflected light should proceed from one and the same plane. But if the light is reflected from different points of the background, situated superficially and deep, as it occurs with sero-albuminous exudations and half-transparent retina, the background must always appear more or less *misty* and *nebulous*. By a clear exudation on the choroid and transparent retina, the background may therefore appear black or reddish, but never misty. By solid deposits on the retina, or between it and the choroid coat, the background may appear differently *discolored*, but never misty. In glaucoma we find, as in this instance, *discoloration* and mistiness, the rays of light coming, as in *turbid* water, from different depths to the observer's eye.

Opacity of the lens, as also of the posterior capsule, frequently follows, and contributes to the change of color, not less than to the morbidity of the vitreous body, the pathological condition of which will be better understood if you compare it with its normal state.

The vitreous body is a perfectly transparent, colorless, highly elastic and *curvable* body, of albuminous consistency, which fills the entire posterior space of the interior of the eye, and is surrounded by the retina and covered in front by Petit's canal and by the central part of the posterior capsule of the lens. The anterior wall of the vitreous body shows the fossa lenticularis.

The vitreous body consists of two essentially different parts, the *vitrina ocularis*, and its coverings, hyaloid membranes.

The *vitrina ocularis* is a perfectly transparent, colorless, somewhat viscid fluid, which is covered by an entirely closed delicate membrane, yet obvious to the naked eye, the *hyaloidea in sensu stricto*, and is connected with the internal filaments of the optic nerve at its entrance. The hyaloid membrane divides on the *ora serrata* into two layers, the anterior of which is the *zonula*, while the posterior one forms the posterior wall of Petit's canal, and covering the fossa lenticularis, the *hyaloidea* connects in its centre so intimately with the posterior capsule that the division of both layers is pretty difficult in the normal state. The lateral and posterior circumference of the *hyaloidea* is covered by a layer of very transparent hexagonal nucleated cells, analogous to the paved epithelium of other hyaloid membranes. They probably renew the hyaloid membrane continually

by their apposition, and thus seem to connect the vitreous body with the internal surface of the retina (in fresh eyes this is clearly visible), but like the epithelium of other hyaloid membranes, it separates soon after death from its substratum, and the retina appears to lay disconnected around the vitreous body. From the inner surface of the hyaloidea proceed at a right angle a large number (180, according to Hannover,) of exceedingly subtile hyalodine plates, which are visible under a microscope of great power, but only on preparations made in a certain direction. Those plates proceed like radii towards the optical axis, in the vicinity of which they solve in an apparently textureless subtile mass. They divide the vitreous body into coniform subdivisions, the base of which is situated towards the sclerotic coat, and the *point* towards the optical axis, where they are not closed, but seem to open and dissolve in that textureless mass, the relative and absolute quantity of which is greater in children than in adults.

There are reasons to believe that those hyalodine plates, situated parallel to the optical axis, are transected by still another system of hyaloid membranes, which represent a number of sacs arrayed into each other, and opened towards the fossa hyaloidea, their side walls are situated almost concentrically to the hyaloidea, but their middle portions concentrically to the posterior capsule. Should this be correct, the vitrina would be included in a great many quadrilateral subdivisions, and it would be easy to conceive the firmness of the vitreous body, as well as the fact that small openings made in the vitreous body, if not near the optical axis, always allow only a small quantity of vitreous humor to escape, and cause a sinking of the vitreous body, only in the vicinity of the wound or opening.

The vitreous body of man, at birth, possesses no nerves, nor vessels. In the foetus there exists a dense net of arteries and veins. The arteria centralis retinae sends off a branch arteria hyaloidea (capsularis, corporis vitrei), which is situated in the beginning outside of the vitreous body, in the direction of the foetal eye-fissure, in a channel which is formed by both ends of the vitreous body, at that time of a horse-shoe shape, in its vertical section. At a later period both ends of the vitreous body meet and surround the artery, bringing it by their development and thicken-

ing nearer to the optical axis, where the artery, accompanied by a returning vein, then appears imbedded in a canal (Cloquet's), the remnants of which may be yet recognized in the adult, by an infundibuliform depression of the posterior circumference of the vitreous body corresponding to the *porus opticus*, and known as the area Martegiani. This channel is surrounded by an extremely thin hyaloid coat, by the last remnant of that part of the hyaloidea which, in the first period of foetal life, lines the fissure of the vitreous body, but later becomes transformed to one of the radial sectors.

The arteria capsularis and the accompanying vein, are the chief trunks of the dense net of vessels existing during foetal life in the vitreous body. In the further advancement of the embryonal life, the net disappears, leaving behind the arteria capsularis with the venous trunk, which divide in the vicinity of the posterior capsule into three or four diverging branches, covering the fossa lenticularis with a dense net of vessels, and form around the lens a circle (*circulus arteriosus Mascagni*). At birth all those vessels also disappear, only Cloquet's canal is still existing, and was shown by Hannover in vertical sections of eyes hardened in chromic acid, in the form of a round opening, the width of which is the larger the younger the eye is, so much so that in the foetus of two months the canal occupied a third of the vitreous body.*

A short time after birth every vestige of Cloquet's canal disappears, but there are reasons to believe, that under certain circumstances the reöpening of the canal is possible. With the vessels disappear the possibility of an immediate exchange of elements between the vitreous body and the blood. An immediate exchange takes place only during foetal life, during the sudden development of the vitreous body. After birth the vitreous body becomes nourished by the blood at a distance, by mediate currency through the hyaloidea.

The direction of the currents is a radial one. The mediating vessels belong partly to the arteria centralis ramifying on the inside of the retina, partly to the vessels constituting the ciliary processes, and are in exchanging communication with the anterior part of the vitreous body through Petit's humor.

* Huschke.

The participation of the vitreous body in all vegetative morbidities of the retina, speaks for the dependency of nutrition of the vitreous body from the vessels of the retina. The intimate relation existing between the anterior parts of the corpus vitreum and the ciliary processes, by means of Petit's humor, may be deduced by the repeated laborious observations of the ingenious Viennese ophthalmic surgeon, Stellwag, of cases in which Petit's canal was filled with exudations of different nature, and in which this exudation was transuding through the posterior wall of this canal into the parenchyma of the vitreous body, but was confined to the parts situated behind the posterior wall of Petit's canal, and thus formed a ring, in the opening of which the middle part of the posterior capsule was situated, and its posterior surface appeared misty nebulous. As yet no nerves have been discovered in the vitreous body; this want of nerves explains the insensibility of the vitreous body, and causes, with the want of vessels, the low degree of vitality (vital activity), which shows itself in the constitution of the vitreous body, and places it on a low degree of organic dignity.

Thus the vitreous body appears to be the mediator of currents which carry nutritive elements to the central part of the posterior capsule of the lens.

The proper physiological function of the vitreous body seems to be a dioptrical and mechanical one. The vitreous body appears to diminish the vibration of the crystalline with large amplitudes, as it would be produced through sudden movement and concussion of the eyeball if it was filled with fluids, and thus seems to secure the fixation of the crystalline in the opening of the ring formed by the ciliary processes.

The subdivisions of the vitreous body admit the curvability and elasticity, which are the chief conditions for the accommodative movements of the lens. Thus it is possible that under a pressure of the ciliary muscle, proportionate to the force of the muscle, and perhaps the external ocular muscles too, the external circumference of the vitreous body recedes, and that the middle portions of it, together with the crystalline, may advance in the direction of the optical axis, and thus accommodate the eye to near distances. Further, it becomes possible, by the curvability and elasticity of the vitreous body, that with

the relaxation of the ciliary muscle, the peripheral part of the vitreous body returns to its former position, whereas its central part, together with the lens, recedes into the natural original situation, necessary for the dioptric apparatus, and calculated for the observation of distant objects.

Concerning the pathological condition of the vitreous body, the researches are of a late date, and not yet carried to such an extent that an apodictical statement could be made regarding the manner in which morbidities in it are formed. For elucidations on the subject, we are indebted to recent anatomico-pathological investigations, and to examinations by the eye-speculum ; but as yet much is to be done in this field. In the interior of the vitreous body, masses occur sometimes which, by microscopic investigations, prove to be analogous to products of inflammation, which undergo a higher development, or a retrogressive metamorphosis. Those masses cannot have entered the vitreous body in a mechanical way, as proved by the integrity of the hyaloidea, and sometimes even of its subdivisions, while containing such masses ; nor can they have been formed by a mere transformation of the normal vitrina, exceeding as they do the quantity of the solid constituents of the vitrina. The presence of these substances in the interior of the subdivisions, may therefore be explained by the endosmotic and exosmotic currents nourishing the vitreous body, and carrying plastic elements from the circulation by imbibition of the morbid nutritive juice rich of plastic elements, and by the deposition of the solid parts through separation of the fluid. This process is not different from transudation. The hyaloidea cannot be inflamed. According to anatomico-pathological investigations, the hyaloidea and its septa may be transformed by splitting, but cannot be inflamed. The hyaloid coat and its septa are wanting, or are altogether perfectly transparent, and apparent opacities prove to be appositions, but never essential alterations of the hyaloid texture. A hyalitis or hyaloiditis, therefore, does not exist. Still less is the vitrina inflammable. It remains, therefore, but to consider the fact that under certain conditions the vitreous body becomes imbibed with a nutritive juice, exceedingly rich in solid elements, and that out of it the more solid elements are deposited in the

subdivisions, in order to be transformed according to circumstances, but mostly to be metamorphosed according to the constitution of the elements transuded by the endosmotic and exosmotic process.

The vitreous body may be morbidly changed and metamorphosed by splitting into fibres, and its anatomical constitution depends more upon the adjacent and neighboring parts, contributing to and modifying more or less the endosmotic and exosmotic process. As long as the product of inflammation is not situated between the retina and choroid coat, so as to cause a secession of the retina from the choroid, as long as the vitreous body remains unaltered in construction, even a minute and small quantity of an exudation will not affect its texture. But if the exuded mass of the choroid is a considerable one, and the space surrounded by the retina and containing the vitreous body, is a diminished one, changes are observable in the structure of the vitreous body. It appears like a gray yellowish brown body, of jelly consistency, no longer perfectly transparent, but dull and smoky. A clear limpid fluid, or yellowish, and yellowish-brown if colored by hæmatine, is eliminated by an incision made in it.

The fluid parts of the vitreous body disappear more and more under a gradual diminution of the space surrounded by the retina, the consistency of the vitreous body increases, and sometimes a secession in fibres is already observable in some parts of it. In the more advanced change, are visible opaque patches, with stripes, with nebulous contours, in the periphery of the remnants of the vitreous body, and also situated in the interior of the vitreous body, whereas the other parts of it still remain in the above mentioned condition. At this stage or period of metamorphosis the hyaloidea is mostly wanted. The opaque stripes and patches appear almost composed of a very fine granular perfectly amorphous mass. The formation of these tendinous stripes and spots begins always on the periphery of the vitreous body, and they extend therefrom toward the centre of it. Of synchysis or fluidization of the vitreous body, and other pathological conditions liable to occur in the vitreous body, as well as of extravasation of blood, I will treat when similar cases present an opportunity.

The morbid alterations of the vitreous body alluded to, offer, as you observe, many and various reasons for the anomalous appearance of the background to the naked eye, as well as to the examination by the speculum. It is also obvious that for the same reason the greenish tint cannot be considered as a pathological symptom of choroiditis, or that form of it called glaucoma, as it may be absent at one period of its development, or, on the other hand, a greenish background may exist without the eye being glaucomatous.

Opacity of the lens, or of the posterior capsule, frequently follows choroiditis. In fact, no eye in which the sight is gone, from the effects of choroiditis, possesses or shows a normal lens. The connection of the lens with the ciliary processes, may be interrupted by atrophy of the ciliary body on one hand, on the other by shrinking of the anterior capsule. The lens itself is transformed by induration or softening; subsequently gradual transmutation into chalk concretions takes place.

Diminution of the power of vision, and different other subjective sensations of light, are the most constant phenomena, associated, to a certain extent, with almost every choroiditis. They are produced by the pressure exerted upon the retina, at first by the congested vessels of the choroidea, and subsequently by that of the exudation.

If the choroiditis is a partial one, the loss of sensitiveness may also be a partial one. for a long time, but extends by degrees on its whole extent. The diminution of sight may occur suddenly, as it does in acute cases, and mostly under annoying phenomena of light, in a few days or even hours; in chronic cases it may occur gradually, steadily, or in intervals, and many months or years may pass before blindness is complete. Frequently the sight is dim, misty, cloudy, in the beginning only for a few hours or days, with or sometimes without subjective phenomena, photopsia, intolerance of light, or the sensation of pressure in the eye or forehead, or with pains along the supra or infra-orbital nerves. In most instances of chronic choroiditis complaints are made of objects appearing as if covered by a veil, misty, cloudy. Many assert that they see better and clearer in the morning than in the afternoon or evening.

By the irritation of, and the pressure on, the ciliary nerves, a dull pain is produced in the eye, and by it is caused the morbid sensibility to light, as well as the lachrymal suffusion and exorbitant pain, as produced in other branches of the trigeminus, according to known laws of peripheral sympathetic irritation.

Want of appetite, vomiting, and low spirits, are often apparent, in cases of choroiditis. Fever may be produced with every choroiditis.

Choroiditis may be produced by causes locally injuring the eye, as accidents or operations, it may be caused by an exertion of looking steadily at small and minute objects for a length of time, as in literati during reading and writing, or in people occupied in sewing, and in jewellers, goldsmiths, etc. This excessive application seems to produce choroiditis, if there exists any disturbance in the circulation, mostly in the vena portæ, or the presence of an organic disease of the heart may lead to congestions, inflammation of the choroid, with serous effusion.

General or constitutional causes may predispose to such a disease; thus Pyæmia, Tuberculosis, Syphilis, and mostly a venous discrasia, or arthritis, the products of which are liable to localize themselves in the choroid coat or its immediate vicinity.

Choroiditis may be divided, according to the quality of its exudation, or according to the cause producing it. The exudation may be a serous, sero-albuminous, or a fibrinous one. The fibrinous exudation may be plastic, tuberculous, or croupose, if the nature of the exudation is considered, or it may be called pyæmic, rheumatic, tuberculous, syphilitic, arthritic, if the predisposing cause is regarded. The diagnosis, however, must be formed under the consideration of the local and constitutional causes and their effects.

The woman before you has been suffering for many years from arthritis and secondary syphilis. If a corresponding dyscrasia much contributed to the development of a glaucoma, it may be less surprising in this cachectic individual, if we reflect that she had to contend with the greatest adversities and cares of life, compelled as she was to gain her livelihood by industrious sewing day and night, in order to support her large family.

Diminution of sight, from slight mistiness on to blindness, and loss of every sensation of light, belongs to the most constant, and generally to the foremost symptoms of this disease. Various and peculiar are the subjective appearances regarding the retina before blindness ensues, during, and after it. Individuals in whom glaucoma exists are mostly of an age in which presbyopia belongs to the normal state, the insufficiency of accommodation occurring therewith. Incompetency for protracted exertion to fix near objects, and motes, may exist without a congestion or inflammation of the choroid coat. Although not even the most intense light is capable of producing the sensation of light in the blind eye, still the appearances of color and light do trouble the patient, as she states, whenever she awakens in the night, or in walking bends her head downward, and usually after dinner and supper, whatever position she may be in. As you hear by her account, sometimes the same form of the appearances occur brilliant, at other times dark, often blue and red, sometimes yellow. In the beginning of the disease the patient asserts that she saw better in the morning than at any other time; about noon the sight became gradually dimmer; now when the sight is already entirely gone she asserts that some days she has the above-mentioned appearances, some days not at all, so that this typical appearance leaves her the hope of regaining the sight, taking it to be a different degree of impressibility to light.

As for the course of this eye disease, it is as different as the causes producing it. Although there may be a predisposition for it determined by the stasis in the choroid vessels, still the qualitatively altered nutritive blood may yet more contribute to the development of such a disease. The localization of the exudation may by predilection be in one or another part of the choroid coat; still, as soon as a sero-albuminous exudation separates the choroid from the retina, blindness will occur, sometimes gradually, sometimes suddenly, according to the way in which exudation has been localized, gradually or suddenly.

As for the development of glaucoma, it depends upon many circumstances, that more or less hasten the transition of one stage into another.

1. The hyperæmic or congestive stage, is often not observed, and neglected by both patient and surgeon, as it causes in the beginning little disturbance, and the inconvenience resulting therefrom, might be attributable to another cause, also.

In some instances phenomena occur which, by superficial observation, might be taken for a simple catarrhal inflammation. The patient advanced in age may complain of heaviness in the eyelids, or of the sensation of a foreign body under the upper eyelid, and, besides injection of the conjunctiva, no other morbid phenomena may be visible. The congestion of the eyelid, however, in suspected cases, is often associated with an anomalous injection of the anterior ciliary vessels with the sensation of fulness in the eye, and its increased resistency.

In other instances, appreciable change in the state of refraction, want of accommodating power during reading, writing, drawing, increased sensibility of the retina, appearances of light, dim sight, hemiopia, diplopia, may attract the attention of the patient. If the complication of phenomena mentioned in both instances, should occur, associated with a morbid predisposition, indicated by the general habitus, or complaints reverting to it, the development of glaucoma may justly be feared.

2. The stage of exudation occurs after some of the enumerated phenomena have been existing for some time, even if they have not been noticed, and begins mostly by a circumscribed inflammation, which soon is followed by serous exudation. Cases occur in which sight is gradually diminished, the objects appear misty, and cloudy. until they are entirely surrounded by an impenetrable cloud. The inflammation takes place often under the most violent, dull, and sometimes continual, other times typically remittent, pains in the eyebrows, or along the infra or supra orbital nerves. In such cases the symptoms of hyperæmia (injection of the ciliary vessels), lachrymal suffusion, and increased secretion of the conjunctiva, greater resistency of the bulb, are observable, together with the symptoms denoting a partial inflammation, as oval form and unequal dilatation of the pupil, partial discoloration of the iris, and partial paralysis of the retina; often the aqueous humor is also turbid. The pains recur even under the most rational treatment, at longer

or shorter intervals, and with every exacerbation the symptoms of a total exudation, and pressure on the retina, are more distinct, and are characterized by the diminution of sight and discoloration. This disease occurs, with febrile reactions, by great exudation of sero-albuminous fluid, in a few hours, or days, whenever a morbid predisposition for it exists in the constitution, and is excited by apparent slight causes, as by a dietetical error, or other causes producing cerebral congestion, or may be produced by more serious ones, as injuries.

3. After a partial or general exudation has taken place, the resistency of the eyeball is increased. The sclerotic coat becomes dirty grayish, or yellowish, and shows leaden color patches, which elevate themselves to prominences, in the subsequent development of the disease. Glaucoma forms the most frequent form of choroiditis.* It develops itself in one eye, in most instances; as in this case, at first on the left eye, but subsequently, after days, weeks, or months, in the right one too. Women are mostly subject to this disease, in the climacteric years. This disease develops itself seldom during the regularly appearing period, but mostly when, as in this instance, this function has long ceased.

[*To be Continued.*]

A Treatise on Uterine Hæmorrhage in all its forms; with some Views respecting Fissures of the Os Uteri as the frequent Cause of Abortion, with their Curative Treatment. By AUGUSTUS K. GARDNER, A.M., M.D., Fellow of the New York Academy of Medicine.

There is no scene in the experience of a physician more trying than the care of cases of flooding. They come when least expected, without premonition, often without obvious cause, and in a moment change a scene of rejoicing and happiness into one fraught with danger and filled with horror.

* According to A. von Græfe, glaucoma may develop itself without the enumerated morbid changes in the choroid coat.

There is something in the mere flowing of blood instinctively fearful. Many will faint at the drop produced from the prick of a pin. The blood accompanying the surgeon's operations not only whitens the cheek of the reckless student, a spectator of the scene, but palsies the hand of the operator himself, to whom no consciousness of power, or frequent exposures to such scenes, renders him callous. Startling and fearful as may be the sight of streams of blood and clotted gore in various scenes, there are none found more appalling than in the obstetric chamber; none where more instant aid is required, and where the whole energies of the medical attendant are so imperatively demanded, or where presence of mind is more important. Decision, too, is necessary. There is no time for vacillation in opinion or action. No time to run home to hunt up some method of treatment. The surgeon, if he finds himself at fault in his anatomy, while an assistant compresses the artery, may turn to his manual for light respecting the course of an artery, but in the floodings of the parturient there can be no temporizing. The knowledge of the requisite treatment must be present, and promptness also in its application. Neither the horror of the scene, the pools of blood, the ghastly, cadaveric appearance of the patient, the impeded respiration, the fluttering pulse; nor the faintings, the tears, or the wailings of mother or husband, the entreaties and prayers of surrounding friends, will disturb the equanimity of the educated and reliable physician. The true man, conscious of his own resources, instead of giving way, but rises as danger is most imminent.

Startling as is this hæmorrhage to the unexperienced; disagreeable and exciting to the man calm by reason of frequent observation; in proportion to the frequency of this accident, it can scarcely be esteemed dangerous. This is by reason of the skill of the physician. Left to itself death would not unfrequently occur therefrom, while it is now of comparatively unfrequent occurrence.

In no branch of the obstetric art have the beneficial results of patient observation, careful study, and justifiable experiment, redounded more to the credit of science and the benefit of the suffering. It is my purpose, at the present time, to review this subject, and to see what experience has found most reliable as preventive and curative in these dread cases.

Uterine hæmorrhage is of various sorts, and we shall consider it under two general divisions :

1st. Hæmorrhage from the unimpregnated uterus.

2dly. Hæmorrhage from the impregnated uterus.

These two grand heads I shall again subdivide into several classes :—

Hæmorrhage from the unimpregnated uterus may arise from congestion or hypertrophy of the uterus, where there appears no marks of active disease in the organ. The intercellular tissue being, however, somewhat congested, and the internal mucous membrane slightly reddened.

More frequently accompanying the congested uterus, there is chronic hypertrophy of the os and cervix uteri, and more or less extensive ulceration of both these portions. Very commonly this ulceration extends up the cavity of the cervix, and by means of the speculum, the blood may be seen freely exuding from the cavity and from the spongy granulations of the external ulcerated surface. Modern science has thrown a flood of light upon the formerly obscure (so called) disease, named menorrhagia, now recognized only as a symptom of various internal well marked lesions. Since the general introduction of the speculum into the diagnosis and treatment of diseases of this nature, he would be highly reprehensible who allowed menorrhagia to continue exhausting his patient, without bringing it into use, both for testing the correctness of his diagnosis and for effecting a cure.

Polypi of the uterus are the next most prolific sources of frequent and continued hæmorrhage. These may exist of all sizes ; sometimes contained within the uterus, within the cervix only, or appended therefrom hanging in the vagina. Very frequently when the hæmorrhage is severe and long continued, the polypus is so small as to be quite unnoticeable by a careful digital examination, from its lying within the os, and is discovered only by a speculum, which stretches open the os uteri and discloses it to the eye.

Cancer of the uterus is also accompanied by profuse flows of blood, but the diagnosis of this form of uterine disease is generally made known by many other well marked symptoms. I have, however, seen a case of cancer when the disease had

advanced, without any suspicion of any disease at all by the patient, until she came to me for incontinence of urine, which had come on within a week, and attributed by herself to a cold, but which proved, upon examination, to be caused by the unobserved ravages of a cancer, which had eaten through the bladder, constituting a vesico vaginal fistula. The cauliflower excrescence is, perhaps, of all the cancerous affections, the most frequent cause of hæmorrhage.

TREATMENT.—Simple hypertrophy of the uterus, unaccompanied with other disease, is of rare occurrence. A case of extreme flooding, probably from this condition of things, has recently been narrated to me by Prof. Barker of this city. It was in a young girl to whom he was called in consultation by her father, a physician of this city. It was her first menstruation, and she was so far prostrated that she was pulseless and apparently dying. So great was the extremity that it was not considered safe to allow another drachm to flow, and with great good judgment Dr. Barker proceeded to tampon not only the vagina, but even the os and cervix uteri. Success crowned this treatment, and when the next morning the tampons were removed, no further flow occurred.

Simple hypertrophy is more commonly found in females advanced in life, at the time of the cessation of the menstrual function. When profuse discharges accompany this condition, an alterative treatment at the seasons of its cessation, will be generally found to diminish its size, and consequently to finally restore the discharge to its proper quantity.

At the immediate time of its excessive flow, I have found nothing to arrest it more successfully than full and frequent doses of *Secale Cornutum*, either in powder or tincture. I have given a drachm of the tincture every quarter or half hour with decided relief. Ice, alum, *acetabulum plumbi*, &c., &c., the usual remedies employed, I need not here mention.

Far more frequently this hypertrophy of the uterus is accompanied by, and perhaps dependent upon, disease of the os and cervix uteri. In these cases, all dependent disease, with the menorrhagia, are entirely arrested by the topical treatment of these affections, by the use of the speculum, according to Ben-

nett's method. The form of disease usually called ulceration, is not always in reality so, there being simply a loss of the epithelium of the mucous surface, exposing beneath a granulated surface. These granulations bleed very freely. They are usually covered with pus and mucous, and a glairy mucus is seen flowing from the cavity of the cervix. Sometimes, even the slight abrasion from the passage of a sound into the os, or the wiping of the granulations even, causes a flow of blood from the surface. Any caustic application, occasionally repeated, is sufficient to entirely restore the parts to their natural character. The hypertrophy both of the cervix and body of the uterus is restored to their natural state, as soon as the active disease is thus arrested. Occasionally a slight alterative course is found serviceable where the hypertrophy is great. This granular condition, which is an enlargement of the mucous follicles, is what is commonly called ulceration, as has before been stated. True ulceration of the cervix uteri, is of two descriptions, syphilitic and cancerous. If the former, the specific character is to be destroyed by caustic, and such internal treatment given as the case may require. Hæmorrhage is rare from syphilitic ulcerations, still it does occasionally occur.

Polypi are easily disposed of. When small and within reach, they may be seized by forceps and twisted off. If larger, it may be necessary to ligature them, or to seize them by a graduated polypus forceps, with which by daily increasing the pressure upon the neck (the instrument being left hanging by it), it soon drops off. If within the os, the uterus should be induced to expel it, by means of Ergot, when it may be seized and treated as above advised.

Perhaps under this head may be classed the floodings from hydatids, as their existence is generally obscure, and the symptoms of their presence often resembling that of internal polypus. The administration of Ergot to cause their expulsion, is the appropriate treatment.

Hæmorrhage from cancer of the uterus, with which we will include the cauliflower excrescence, is very common with those afflicted with this grave malady. Where the disease is confined to the cervix, the better treatment would undoubtedly be excision, and more especially if the disease was the cauliflower

exerescence. Farther than this, astringent washes, alum, and ice, inserted into the vagina, will often afford a temporary arrest. A lotion will frequently be found effectual, made as follows :

R.	Nitras Plumbi, gra. v.	
	Aquæ,	f.ʒj.
M.		ft. lotis.

The acetate of lead and the mineral acids, astringents, &c., internally, will often be of temporary benefit.

I come now to speak of the *hæmorrhages from the impregnated uterus*. Those that I have already described rarely are so excessive, if those arising from cancerous degenerations be excepted, as to threaten life by the immediate loss of blood, although the secondary anæmic effects may result in death. In this class of cases time is afforded for thought and consultation.

It is from the hæmorrhages from the impregnated uterus that immediate death results, and it is these that we are now to examine. This class may well be considered as hæmorrhage occurring before and at full time ; and this class may again be subdivided into *ante partum* and *post partum* hæmorrhage ; each of which is capable of a further division, into hæmorrhage preceding and succeeding the delivery of the placenta.

Loss of blood may occur in both of the classes of cases referred to under the first grand division, to a fatal extent ; but while the fatal result may be the same in both cases, they are, in every other respect, far different. Except in rare instances, the hæmorrhage before full time is always preceding the delivery, while that at full time is posterior to it.

Hæmorrhage not unfrequently occurs at the next menstrual period following conception. The woman, especially she who has never borne children, after half suspecting from various signs that she was pregnant, at her usual period is not only "regular," but profusely so, with more than usual pain, and with numerous clots which have not previously characterized her periodic secretion. A careful examination of these clots would discover imbedded in them a rudimentary foetus. The

long formed habit of nature, conjoined perhaps to too vigorous exercise, too stimulant food, or even mental emotions, caused the secretion to be continued as usual, and the ovum to be expelled.

These cases are generally considered to be simple menorrhagia, and are treated accordingly. They rarely, if ever, result in farther difficulty.

At a somewhat later period in gestation, when the ovum is from two to five or six months, abortion is very frequent, when the hæmorrhage is alarming. These occur from various causes, *and never without a cause which should be discovered by the physician*, and the difficulty obviated afterward. This I wish most especially to have noted, that WHEREVER THERE IS A MISCARRIAGE, THERE IS ALWAYS PRESENT SOME ACTUAL PERCEPTIBLE AND OFTEN TANGIBLE CAUSE. In many cases this is easily known. Some injury, sudden fright, the effort of vomiting, has been sufficient to destroy the integrity of the ovum, and as a dead substance, as a foreign body, it has been expelled. This may occur as the effect of mercury, or other medicines, the sympathetic action of the uterus stimulated by cathartics. Great fatigue may be the existing cause of the expulsive uterine action. But there are many abortions which have been considered to be without cause. Females have aborted without any particular reason, every few months during many years, and the physician, in his ignorance of any cause, has stated that it was from the force of habit; that there was a tendency, from habit, of the uterus to throw off its contents upon the least irritation or excitement, when the ovum arrived at a certain maturity. Females have been made to believe, what the physician himself, once equally credulous, believed, that there was a "tendency to abort;" and have been made to lie in bed for weeks and months, made sick by want of air and exercise, to prevent a senseless organ, devoid even of the nerves of sensation, from yielding to the temptation or tendency to abort.

Thanks to the added wisdom of the nineteenth century, we now know better than this. The new lights of science have added ocular evidence to the vain theories invented to conceal our ignorance.

At the given period, or thereabout, the woman with the ute-

rus having these bad habits, perceives that the usual vaginal secretion is slightly tinged with red, which by degrees deepens in color, till a decided hæmorrhage, accompanied by pains in back, thighs, &c., with involuntary expulsive efforts, is the result; and sooner or later the foetus is expelled. If one examine the uterus, as far as may be done by means of the speculum, either before these symptoms commence, or after the abortion is completed, he will find that there is local disease of the os uteri, which is the *fons et origo* of all the trouble, that there is uterine congestion, ulceration, or lesion of the epithelium, and enlargement of the mucous follicles, or fissure of the os.

Uterine congestion, as a cause of abortion, not unfrequently depends upon high-feeding—not too much in quantity, but too stimulating in its character upon the circulation. This is noticed in animals. Lewis S. Hopkins, M.D., says:

“In the August number of the *Farmer*, complaints are made of abortion in cows.

“High feeding has a direct tendency to produce this; if a cow has done so once, meal should be kept from her a month or two before the anticipated period of abortion, or during the greater portion of the period of gestation. Many a female of the human species has only avoided the same ‘mishap,’ by strict attention to diet.

“Too high feeding, with no hard work, often produces an irritability not only of the nervous, but of the circulating system, in its minutest subdivisions, as spread over secreting surfaces. There is a greater tendency to this in the female system than in the male. The *mare* fed on oats, and but little used, will often become excessively snappish, and intensely cross. Withdraw her oats, and she loses this irritability; or give her hard work, and the effect will be the same. If in the cow this irritability of the secreting surfaces, induced by continued high feeding, is fed and fanned by meal and grain, a tendency to *inflammation* is produced in the uterus, which, during gestation, is the most irritable point in the system. Nature has no other way to relieve herself of this danger to the life of the mother, when the meal and grain continue to flow in, than to prevent inflammation of the womb, and death, by evacuating the contents of the uterus. The increasing irritability of that organ, excites its repeated contractions, as at the full period, and abortion results, and the mother is saved at the expense of the young. If the young is carried to maturity, it survives, and the mother dies of inflammation of the womb.”

Ulceration or lesion of the epithelium and the enlargement of the mucous follicles, as the second cause of abortion, depends

somewhat upon the situation of the placenta. If high up at the fundus of the uterus, unless the abortion be effected early, the current of blood is remote from the abraded surface, which is either healed by this derivative or remains *in statu quo*. Should the placenta be inserted lower down, the tendency to bleed is much greater and abortion more probable.

In the great majority of cases of abortion at the completion of a certain period, there is fissure of the os uteri.

If we take the description of the changes of the os uteri during gestation, as formerly believed and as still described in the books, we shall not be so well able to account for the fact that a fissure of the os produces abortion. But we take that given and demonstrated by M. Stolz, in 1826, and which has now received the sanction of the most eminent physiologists and pathologists. These views have recently been plainly expressed by L. Shanks, M.D., Professor at Memphis Medical College, whose words I will borrow.

“The description of these changes, as furnished in most of the books, is, that in the progress of gestation to term, the neck spreads out at its upper part, so as to aid in the enlargement of the womb, and thus, by expanding from above downwards, the neck becomes shortened, until at the end of the ninth month, it is merged in the ovoid form of the womb, leaving only a ring of variable thickness. Instead of this being the true anatomical change, which takes place in the progress of gestation, it is found, from careful examinations, that this description is entirely erroneous. For a proper understanding of the diseases of the uterus, I have already attached much importance to a correct knowledge of the anatomy of the neck and the body, and especially of their respective cavities in the normal, undeveloped state.

“The length of the cavity of the neck being generally about a third greater than that of the body, and in the healthy, undeveloped state, having its internal opening so closed by the contraction of the circular fibres, as to make it somewhat difficult to pass a medium-sized sound through it, into the cavity of the body. According to the description of M. Stolz, which is now fully confirmed, instead of this internal opening of the neck expanding, and the superior part spreading out downwards

during gestation, the reverse of this takes place. Early in pregnancy, the os and lower part of the neck begin to soften. This softening gradually extends upward, though less rapidly, in primiparæ cases. As the ramollisement extends from the os upwards, the os and neck expand in multiparæ cases, though in primiparæ cases the cavity of the neck expands without a corresponding patulence of the os, which gives the neck a spindle shape. The cervix loses but little, if any, of its length. By the seventh month, the intra-vaginal portion of the neck has undergone this change, being softened, and the os so dilated in women who have been mothers, as to admit readily the first phalanx of the index finger. This ramollisement and expansion of the cervix progresses upwards, so that a few days before full time, in its proper course, the circular fibres, closing the internal opening of the neck, become softened, and it dilates."

It is not necessary or appropriate to follow this interesting description farther, in its method of accounting for the cause of labor commencing, a theory far more plausible than any of those formerly given, in the vain attempt to reconcile facts with the erroneous theories of the day. Sufficient for us at the present time has been given, proving that the change in the os uteri commences at the external os, and not at the internal os.

Now we know that the vast majority of cases where fissure of the os exists, not only does it commence at the inferior extremity of the cervix uteri, but that in far the greater number it is confined to that portion.

With this fact before us, and the knowledge that this same portion of the cervix, in the progress of gestation, first commences to soften and contract, we may easily see the heretofore unaccountable cause for numerous abortions. The softening renders the already irritated portion, to the vessels of which an unusual activity has been imparted, still more vascular. The subsequent contraction draws apart the sides of the fissure, exposes the orifices of the various vessels, a slight hæmorrhage ensues, which gradually increases, till the life of the germ is destroyed, or the bleeding becomes so profuse as to stimulate the uterus to the expulsion of its contents, or to endanger the life of the mother. An abundance of such cases are given by Gooch, Dewees, and other writers, styled by them "irritable

uterus," but in which the pathological changes were most undoubtedly such as have been here described. This is not a fanciful theory, for which we seek for facts to substantiate, but, on the contrary, it is one deduced from facts. Numerous cases have occurred in my own practice, and in those of my friends, which I have been called to see in consultation.

A few marked cases only will I relate, in a very brief manner, as illustrative. A lady, about thirty years of age, was confined with her first child at full time, after a very severe labor of some days duration. I saw her two years after, when she stated that she had never enjoyed a well day subsequently to this confinement. That she had nursed her infant about a year, constantly troubled by pain and weakness in the back and loins, accompanied by a more or less profuse leucorrhœa. That latterly she had been much debilitated by repeated abortions, occurring from about the second or third month of pregnancy. They commenced by slight bleedings, increasing to a profuse hæmorrhage, threatening her life. Vaginal digital examination discovered a marked prolapsus of the uterus when erect, but which subsided when in the recumbent position: the cervix immensely hypertrophied and ragged. A better investigation with the speculum disclosed the os, so immense as to be scarcely admitted between the fully distended blades of a four-bladed Ricord, divided into three irregular-sized lobes, the edges of which were covered with profuse unhealthy granulations, the whole surface denuded of epithelium, and the entire organ bathed in a profusion of the muco-purulent secretion usually accompanying these lesions. The case was a plain one. The os had been torn in those places at the first labor, and these lacerations, never healed, were a constant source of irritation, and, when pregnant, the undoubted cause of all the abortions, subsequent.

I will mention but one more case further to substantiate the view which I have taken of this form of abortion. I lay more stress upon it, because these cases have been one of the opprobria of medicine; and having, as I think, given a conclusive proof of the theoretical cause of these affections, I wish now, by some cases plainly showing the facts, as sustaining the theory, and from which I have deduced the theory, to convince all

of the correctness of this view, and to lead to a reformation in the past and present palliative and temporizing method of treatment. In the vast majority of these cases of irritable uterus, in nine out of ten, where there exists this periodical tendency to abortion, cure is not only possible, but if the treatment proper for the affection be employed, the cure is as certain as may be predicted in any disease that exists. If, however, the eyes are to be closed and the ear shut to the facts which the advance of science has revealed,—if, supine in our conservatism, we join with the blind old foggy-ism in their empty denunciation of the speculum uteri, and its immense utility in these affections,—dogs in the manger, we neither use it ourselves, nor permit others so to do,—worse than the most arrant quackery, which always proposes something new, and thereby sometimes ignorantly benefits, we are content with the ashes of the past, instead of seeking for living fire in the present; if thus contented in our partial acquirement, there is henceforth no advance in science, and the unnecessary sufferings of millions remain unmitigated, unassuaged.

But my object is not to attempt to convince those “who, seeing see not; and hearing hear not, neither do they understand,” but merely to state my own views, in all simplicity, and some of the facts upon which they are founded.

A most instructive case, to which I refer in consideration of several views to be made in this paper, is the last reported by myself in the *American Medical Monthly* for October, 1854, entitled “*Fifteen Selected Cases of Operative Midwifery.*” After two confinements at full time, the lady experienced a slight jar in stepping from her carriage. She was daily expecting her third confinement. Pains soon came on. She was speedily confined with a dead child. Two years subsequent she aborted at about the third month. This commenced with a slight discharge of bloody mucus, which was supposed by her medical attendant, and myself, to arise from fissures of the os, and the next day was appointed for making an examination, but before that time arrived she had aborted, and her life was in great jeopardy. When sufficiently recovered, some weeks after, from the excessive hæmorrhage, to which reference will be subsequently made, her physician found, upon examination by the

speculum, not only the local congestion to be expected after so recent a confinement, but induration, and fissures apparently of long standing, and quite sufficient to account for all the difficulty she had experienced.

I might quote scores of similar cases from experience in the Northern Dispensary, in the class of Diseases of Females, and I am entirely convinced in my opinion of the origin of the hitherto unknown or unsuspected causes of numerous abortions, as proceeding from local disease of the womb, and not to be described under the names of "irritable uterus," or any other vague and unsatisfactory appellation.

Leaving this very important class of cases but barely alluded to, and imperfectly illustrated, I proceed to discuss that form of *uterine hæmorrhage which springs from within the cavity of the uterus*, existing in cases both before and at full time, where the blood proceeds from a partial or complete detachment of the placenta. This accident occurs most frequently where there is placenta prævia, where the placenta is placed partially or centrally over the os uteri. The method of the obliteration of the cervix, as I have described, from the inferior os, and not vice versa, accounts for the rare cases of hæmorrhage before full time, which we should suppose more frequent than it has been found to be, were the absorption in the contrary direction. In 1853, I exhibited to the students at the College of Physicians and Surgeons, an ovum of six months, with the membranes intact, where the placenta was completely over the os, and was detached and born anterior to the child. There was constant hæmorrhage in this case for two days before its delivery. These cases are not unfrequent, particularly at full time.

I was recently called in consultation in a case of labor at full time, where the woman was rapidly sinking, pulse very fresh, and 180 or 190—too rapid to be distinctly counted—when I was informed there was a rupture of the womb, but which symptoms I discovered to be solely attributable to a detachment of the placenta and profuse internal concealed hæmorrhage, and the child dead, therefrom, probably.

Mrs. L——, some two years since, was pregnant at the

seventh month, and, with the exception of being much troubled with nausea, was, though delicate, in pretty good health, and had taken a short walk in the morning. While sitting at tea, late in the evening, she felt a flow, which was discovered to be bloody, and immediately sent for me. It was her first child, and the discharge was very profuse. I supposed that the membranes had ruptured, and the waters colored with blood made the very profuse quantity observable during the three or four hours subsequently. Examination evinced very great tenderness of the os uteri, which, however, did not admit the finger. This flow continued with great profusion until the lady complained of singing in her ears and motes in her vision. A fresh examination discovered the membranes intact. The source of this very great hæmorrhage was not known till within a few weeks, and subsequent to another labor at full time, and without any unpleasant symptom. A speculum examination for leucorrhœa, and pain and weakness in the back and loins, discovered the same tenderness of the os,—persistent since the first miscarriage,—congestion and hypertrophy.

THE TREATMENT of these cases is of two characters, viz: the immediate hæmorrhage; and secondly, for the cure of the causes of the hæmorrhage.

When called early to a case of threatened miscarriage, when the hæmorrhage is slight, and the symptoms indicate its local character, from ulceration or fissure of the os, a speculum examination should be immediately instituted, and the parts, if found in this condition, cauterized by nitras argenti, thus temporarily arresting the hæmorrhage, and the uterine plethora allayed by general bleeding, and the excitement quieted by an anodyne. Should this treatment be effectual, the disease of the os should be subsequently treated by local applications, until the parts are restored to their normal condition.

If, however, the hæmorrhage was not the primary symptom, or if the abortion was threatened in consequence of some fatigue, great exertion, or excitement, where there may be a debilitated condition of the uterus, which, in its relaxed state, opens the os, or in some way diminishes the circulation, and impairs its vital functions, I have found great benefit from the tonic effects pro-

duced by small doses of *secale cornutum*. The slight contraction consequent upon its action, closing the bleeding orifices, and frequently entirely arresting all further discharge and difficulty. This point I have already fully stated, with cases illustrative, in an article entitled, *An Essay on Ergot, with New Views of its Therapeutic Action*; published in the *New York Journal of Medicine* for September, 1853.

The bleeding, in the cases I have mentioned, will rarely, if ever, be so great as to endanger life. If, however, in a case where the origin of the flow is doubtful, it amount to any considerable quantity, the result will be to dilate the os, so that the finger may determine whether there be *placenta prævia*. If so, we should temporize, by resorting to perfect rest, external and internal applications of ice, alum internally,—a large piece passed into the vagina, and placed near the os uteri. These means will sometimes arrest the flow, to be repeated again at some future time. If, however, the patient be at the full time, or the miscarriage cannot be prevented, the next duty is to rupture the membranes, either through the presenting placenta by a small puncture, or, what is preferable when the placenta but partially covers the os, through the membranes at one side. Ergot should then be given in sufficient quantities to keep up a continued contraction of the uterus, and to thus force the presenting portion of the child firmly down upon the bleeding surface, and thus to dam up the flowing stream. In this manner the head forms a natural tampon. If this be not successful, manual interference must be had recourse to, and the hand passed through or by the side of the placenta, and the child turned and delivered as speedily as may be. In some cases the vaginal tampon may be found advantageous, but rarely in this form of trouble, when the child be *à termé*! and in general it will be found but a temporizing method of doubtful utility.

When, by any accident, we have a detached placenta, the case is indeed a grave and startling one, calling for great decision and promptness of action. It resembles rupture of the uterus, in many of its symptoms, and is often extremely hard to diagnosticate. The fluttering pulse, anxiety of countenance, restlessness, retrocession of the presenting portion, exist, as in rupture. In general, however, the pear shape of the uterus is

retained. Fortunately, the duty of the accoucheur is alike in each case. Immediate delivery is imperative. From the prostration from the loss of blood, there is no rigidity of the os to interfere with the introduction of the hand, and the immediate delivery by turning may be effected, if the head has so far retreated as to prevent the delivery by the forceps. I have seen but a few cases of this form of difficulty, and speak, therefore, from a limited experience. There seems, however, to be no other feasible manner of operating when these appalling accidents occur.

Having spoken of *hæmorrhage* before delivery, I come now to describe that *occurring after the birth of the child*. This I divide into two classes, the first ending with the delivery of the placenta, and the second embracing the floodings after the placenta has been expelled. In these two classes are embraced the hæmorrhages most commonly found in practice.

There are a small number of females who are peculiarly liable to flooding, and who always commence to flood as soon as the child is born. There seems to be with them some peculiar nervous distribution to the uterus, which prevents this organ from immediately responding to its new condition. The pains have been powerful and effectual, for a longer or a shorter time, till the child has been expelled. Up to this period there seems to be no want of contractibility in the organ, and as the head advances, and the child is expelled from the cavity of the womb, the womb contracts upon it, and is gradually diminished in size. How is the case usually conducted in practice? As soon as the head is expelled, the anxious attendant begins to fear that every moment the hæmorrhage will commence, and impetuously seizes upon the expelled portion and pulls away for dear life, although without much regard for the life of the child, from the danger of rupturing the ligaments of the cervical vertebræ and the spinal cord. In great haste, therefore, the child is extracted, and sure enough, the hæmorrhage commences just as was expected, and the physician congratulates himself that the child is out of the way. But the placenta is still there, and this he also forcibly delivers. Still the hæmorrhage continues, and the case soon becomes one of great peril to the mother,

anxiety to the physician, and horror to the surrounding friends.

The cause of all this, is the bad practice of the attending physician, in very many cases.

The labor went on well enough as long as it was left to itself. Then why not continue? "Meddlesome midwifery" does not mean solely in applying forceps, using the vectis and Smellie's scissors. On the contrary, there is more "meddlesome midwifery" in the practice of many gentlemen who never touch an instrument. It is especially illustrated in the case just narrated, not solely from imagination; for such practice I have myself seen and heard of.

The uterine contractions and diminution in volume, as I have before stated, goes on regularly so long as the child advances toward birth, and as the head passes through the superior, middle, and inferior straits. While it rests upon the perineum, and even when entirely expelled, we have no flooding. How then shall we proceed to continue this desirable state of things? And this is the great point to be especially noted in the treatment of these cases. IMITATE NATURE, *as she has already manifested herself*, or rather, LET NATURE ALONE. Instead of frantically seizing hold of the head and pulling like a madman, sit down quietly and wait for nature to finish a work she is abundantly able to perform, and which she has so far ably and effectually accomplished. From some idiosyncrasy the uterus is unable to effect a *speedy* contraction, and time is necessary. Let it take its own time, and yours likewise. Patiently wait, not only till nature has expelled the shoulders, but the hips also, and do not think of lending a finger's strength toward completing the delivery, so long as any portion of the child remains within the uterus. Every one knows that it has long been recommended to introduce the hand into the uterus to arrest flooding, by the stimulus of its presence. Does not the body or legs of the child do this work as effectually as the hand of the accoucheur?

In this method I have treated very many cases. One lady, several times confined in England, and once by the late Dr. J. Kearny Rodgers, I delivered soon after the regretted decease of that gentleman. In every confinement she had bled profusely. At this labor everything was prepared for a similar

scene of doubt and danger. I administered a half ounce of the tinct. of ergot as soon as the head pressed upon the perineum. It was soon expelled. I then repeated the dose, and in from ten to fifteen minutes the uterus itself, by repeated contractions, expelled the child in safety, and not a gill of blood was lost.

Dr. Isaac E. Taylor related a case to me in which he was called in consultation, very similar to this, where in several previous labors the hæmorrhage had been profuse. He arrested the attending physician in his desire to deliver the child immediately, and suffered *forty minutes* to elapse after the head was delivered before the whole child was taken away from the mother. The child was purple in color from the influx of blood into the head and from a temporary asphyxia, but subsequently did well, while the mother had no flooding of any account,—the perineum only showing a slight flow, not amounting to a hæmorrhage.

Sometimes, however, the energetic, spasmodic action of the uterus does not permit the delay, giving no time for the uterus to contract firmly upon itself. In the case of the wife of a member of the Academy, who flooded after every labor to a really frightful extent, the uterus violently contracted until the child was completely expelled, and then relapsed into a state of inertia, accompanied by most profuse hæmorrhage.

It is the duty, therefore, in all cases, to do as little as possible to assist the delivery in this last stage, and particularly when subsequent flooding is to be expected.

In cases of abortion, when the means already proposed in such cases do not arrest the abortive action, if the flow of blood be great, it is advisable to give large and repeated doses of the *secale cornutum*, in order not only to stimulate the uterus to a more speedy discharge of its contents, but also to press the foetal head, or presenting portion, strongly against the opening of the os uteri, and thus to act as an internal plug. Should, however, the flow be excessive, in addition to this treatment it may be advisable to tampon the vagina. This may the more appropriately be done early in the flow, when the firm and slightly dilated os uteri evinces that some time must elapse before the contents can be expelled. In these cases it may frequently be well

to pass a piece of alum into the vagina before using the tampon, to assist in the coagulation.

It should be remembered that the bleeding in these cases is especially efficient in relaxing the cervix, often a tedious and painful process, and that the hæmorrhage to be particularly dreaded, arises in an after period from the retained placenta, of which I shall speak in its proper connection.

I, not unfrequently, as the head passes the vulva, and particularly when there is any fear of flooding, give a half ounce of the tinct. secale cornutum, as a precaution against flooding, and not as an adjuvant to the labor. The alcohol acts as a general stimulant, and the ergot tends to ensure a permanent contraction of the uterus.

When the child is delivered, then, not unfrequently, a flow commences from the placenta, which is more or less detached from the uterus. The first aim is to secure uterine contractions. It is worse than useless to deliver the placenta, if this is not effected; for if this is done, instead of a few sinuses left open and bleeding, there remain those of the whole placental surface, and the flow is thereby very much increased.

The uterine action should be excited by the administration of ergot in full doses; (I have, not unfrequently, given ʒvj. of the tincture in the course of an hour, and from which no injurious effect can be expected;) by firmly grasping the uterus through the parietes of the abdomen; abdominal frictions; ice to the abdomen, alternated with cloths wrung out of hot water; the cold and hot douche alternated: these, one or all, will soon produce a temporary, if not permanent, contraction. During this period the placenta should be delivered. If requisite, the hand should be introduced, and the placenta seized, and, with as little force as possible, removed. The uterus should be suffered to do this action by its own expulsive force.

There is much said about placentas being attached to the uterus, adherent placentas, &c. While I am far from doubting this condition of things to sometimes occur, (as in the case of a woman kicked in the side, by name Cornetty, at the Boston Poor-House, in 1844,) I am inclined to think it a rare occurrence. Every placenta is adherent, and I defy any one, in an uterus at its full distention, to peel one off from the uterine

walls. The placenta is always adherent until the uterine contraction slides the uterus away from its surface, leaving it free. When, therefore, the hand is introduced and an "adherent placenta" is discovered, it is but another method of stating that the uterus is found but partially, or not sufficiently contracted to have detached the placenta.

The texture of the placenta is of various characters. Sometimes we have one firm and tough. These can be torn off, with sufficient force, provided a border or an edge be found detached upon which to lay hold, or the uterus may be excited. Sometimes they are soft and pliable, when they are easily torn in pieces. Occasionally a small portion remains attached to the sinuses of the uterus, too small for the uterus to act upon as a foreign body. Great injury has, not unfrequently, been done, by attempting to detach this insignificant portion, under the idea of present hæmorrhage and future inflammation to ensue from its presence. The fact is, that in such a case no blood flows through the placenta, for the character is so changed as not to be able to perform this office. Indeed, I do not think there are many who imagine that a hæmorrhage from the placenta ever occurs,* but from the uterine walls, from which the placenta has been removed:—no blood can flow from the uterine sinuses, for they are firmly plugged by this remaining piece of placenta, so firmly that the plug cannot be easily removed; no hæmorrhage can, therefore, ensue, unless it be from the neighboring sinuses left patulous by the removed portions of the placenta. But if the remaining piece is small, it cannot interfere with the contraction, which will close up the open-mouthed vessels, and thus there will no bleeding ensue from the presence of this small portion remaining.

The only ill result that can therefore occur will be subsequent inflammation. In general this small portion will speedily be detached and discharged by the after-pains—at any rate it cannot be considered to be so fruitful a cause of subsequent inflammation as the forcible attempts to remove it.

It is frequently very difficult to know whether or not the whole placenta is delivered. From the irregular contraction of the

* Vide Dr. M'Kenzie's paper before the London Medical Society, Dec. 17, 1853.

uterus there frequently appears to be a portion remaining, when in reality the suspected part is the internal surface of the uterus, somewhat rough where the placenta had been attached. In the case of a lady, to whom I was called at the request of the attending physician, a few months since, confined with a premature five months child, the os was rigid five minutes before the child was expelled. It suddenly opened, expelled the foetus, and as suddenly closed, retaining the placenta within. When I saw her, the after-birth was partially delivered, in a mangled state, and when I removed the remainder (with much difficulty passing my hand within the cavity of the uterus), it was impossible to say whether it was all delivered or not. Interiorly the sensation to the hand indicated that a portion remained, but I concluded that it was but a part of the uterine surface, and I let it alone; the hæmorrhage ceased, and no inflammation occurred, as undoubtedly there would had I attempted to remove this real or supposed portion.

This state of things is of not unfrequent occurrence in abortions and miscarriages. The uterine efforts force through the firm and imperfectly dilated os, the yielding foetus, adapted by its shape to make an easy exit. When this occurs, the placenta is very generally left behind. Its broad, flaccid mass, resists the attempts of nature, not only to dislodge it, but to force it through the rigid and narrow opening. It, however, not unfrequently succeeds, so far as to separate a portion from its uterine surface, and thus to cause a continued hæmorrhage. The feeble cord is, in the vain attempt to remove it, broken off, and the protruding membranes offer but a feeble hold by which to extract the bulky placenta.

In these cases, it is generally recommended to securely tampon the vagina, and to trust to time for the result. The action is the formation of a clot, thus arresting further hæmorrhage, and the leaving the placenta, either to be expelled from the uterus by the further softening and enlargement of the os uteri, assisted by the normal contractions of the uterus, or assisted by ergot; or to be decomposed, and thus flow away, or be absorbed.

It may readily be seen that there are many risks to which the patient is exposed, from this treatment. First, the clot

intended to restrain further flow, will not be formed until the cavity of the vagina [which is always, no matter how thoroughly plugged, capable of containing more or less blood, perhaps an ounce or two only, but still enough to be often worthy of serious consideration,] is filled. Next, the cavity of the uterus will, not unfrequently, continue to receive blood, and often to a very great amount,—the uterus may be considered capable of expanding to the size to which it had attained when the labor commenced. In an abortion at two or three months, this quantity will not be very large; but if the patient has previously lost any considerable amount, this is deserving of especial attention.

The tampon, therefore, is to be considered a very valuable means of arresting hæmorrhage, in cases of abortion when the patient has not previously flooded, but one of doubtful utility if the hæmorrhage has been profuse, and rarely if ever to be used in any form of hæmorrhage at or near the full time, after the child has been delivered. From the very fact of the tampon shutting the vagina, we are prevented from ascertaining the actual condition of things from time to time, and the result is an entire ignorance whether the continued prostration, the occasional faint feelings, dizziness in the head, *tinnitus aurium*, &c., be caused by a continued hæmorrhage, or be but the results of the derangement of the circulation, from the previous great loss of blood, or nervous irritability.

The subsequent ill results from the use of the tampon need not here be enlarged upon. It is only necessary to allude to the uncertainty attending its final removal, and the fear of irritation or inflammation attending its too long use; the danger of renewed hæmorrhage from its too speedy removal; the liability of uterine inflammation from the presence of a foreign body, the placenta and clot in the uterus; the chance of phlebitis from the absorption of pus, &c.

It is on this account that writers and practical men of late years have urged the immediate removal of the placenta. In abortions and miscarriages at an early period, generally there is little fear of a want of uterine contraction following. It is not the danger arising from this plan, but the difficulty of effecting it, that has prevented its general adoption.

How shall the small and fragile placenta be seized hold of and withdrawn? Some have recommended the introduction of one finger into the uterus, and bringing down one edge of the placenta, and twisting it round and round, not only thus to detach the entire mass, but to also so shape it that it may the more easily pass through the os. Where this can be done, by all means do it! But it should be remembered that in the great mass of cases, it is impossible to reach the os so as to pass one finger into its cavity, far less to effect any good result, if it arrive there, to say nothing of the utter impossibility of aiding the finger with the thumb of the same hand.

I have, however, effected the desired result, as already reported,* in one case, by passing a small pair of polypus forceps through the os, and thus seizing the placenta, twisting it round, and by one or more operations of this sort completely detaching it and bringing it away. This operation I conceive to be the true method of treating these cases, particularly those in which a few more ounces of blood are to be feared as liable to be fatal. The tampon may be used if early applied, and where the pregnancy had not advanced more than three or four months, but never afterward, unless as a temporary resort, while fitting instruments were obtained.

In cases of flooding at or near full time, when the afterbirth is retained, I have said that after uterine contractions are obtained, the placenta should be speedily delivered, and if necessary, by introducing the hand. When the hand is introduced, especially if cold, uterine action will take place, very generally. But it should be especially remembered that the placenta is not to be violently torn from the uterus, and removed, unless there be uterine action sufficient to indicate to the operator that the uterus does and will fully contract, lest by so doing new sinuses be laid open, and fresh and increased bleeding be the result. Neither should the hand be removed until the uterus contracts down upon it as it recedes.

Some operators have recommended that a fresh lemon be introduced with the hand, and crushed within the cavity of the uterus, that its acid might act as a local stimulant. Others

* *American Medical Monthly*, September, 1854.

advise the injection of a large quantity of cold water. I have never personally used either of them, but while I may allow them merit as adjuvants, they cannot be used to the neglect of the plans and treatment I have already stated. I give it with the more confidence, from the fact that, although having had some experience in troubles of this character, I have never had a patient die, either from the immediate or subsequent effects of hæmorrhage from the uterus, accompanying labor.

Whether, therefore, the hæmorrhage proceeds from the placenta,—as a very few state,—or from the uterine walls, from which it has been torn,—as is the general opinion,—the facts observed by Dr. Mackenzie and others, in their experience, and in experimentation upon the lower animals, all unite in the propriety, aye, the absolute necessity, of removing the placenta. To this I have added some important points, as they seem to me, to guide in performing this serious operation.

But the hæmorrhage is not always arrested by this delivery of the placenta, and sometimes, when this is effected naturally, the hæmorrhage commences for the first time,—how is this to occur, and how shall we meet its exigencies?

It occurs either from a want of, or an irregularity in the character of, the uterine contraction, in the first place, and secondly, from a mechanical impediment to the closing of the uterus, and a consequent hæmorrhage from the patent mouths of the uterine vessels.

The uterus, not unfrequently, seems to have lost its power, and is unable at once to contract persistently and effectually. Its nervous energy is wanting. One seizes it with the hand through the abdominal walls, and it is hard and like a ball under the grasp, but in a few moments it is felt getting softer and softer, and finally the firm mass is not to be found. It seems to have eluded the grasp, but it has only dilated again, again by more external irritation to recontract. But with every dilation its cavity is filled with blood, and with every contraction the gush is perceptible externally! Whence is this? And what is to be done?

Sometimes a firm contraction is felt, and yet the hæmorrhage

continues. This may arise from the hourglass contraction, which occurs alike after the placenta is delivered as before.

This irregularity of contraction is developed in different localities; more frequently, indeed, does it occur from the abnormal action of the circular fibres of the uterus, which, by their exclusive operation, cause that form known as the hourglass; but this same irregularity is manifested also upon the portion below and upon the neck, and thus causing a concealed internal hæmorrhage, by the flow of blood being thus prevented from escaping externally and being perceptible. This form is particularly dangerous, on account of its subtle progress,—not unfrequently the patient is dead before anything is known of it.

In December, 1852, I delivered Mrs. Mason with forceps of a living child, and she was safely put to bed, and I remained with her about an hour. Happening to pass by about an hour afterward, I found that she was complaining of a disturbance of vision, and of hearing water boiling. I was informed that she had not had the least bloody discharge, and that these symptoms had come on after a slight vomiting. On examining the abdomen, the uterus was found much distended, as was afterward known, with clots of blood. This was properly attended to, and she subsequently had no further hæmorrhage.—Many similar cases might be mentioned, for they are sufficiently common to have been noted by every practitioner.

It remains now for me to mention the remaining species of uterine hæmorrhage, and that is where this is kept up from the presence of a mechanical impediment to the contraction of the uterus. This occurs in the following manner:—

When the placenta is expelled from the uterus, some small clots remain, and the uterus not being immediately contracted, the flow continues until a considerable clot fills the cavity of the uterus. When once this occurs, it is almost impossible for any amount of uterine contraction to expel it. It is not a plain, round, smooth mass, but its surface is closely adherent to the uterine parietes. Every one has seen with how much force the blood drawn into a bowl adheres to it, so that the vessel may be everted without disturbing its contents. This adherence is equally strong to the uterine parietes, and far more extensive.

In addition to this, upon the surface to which the placenta was attached, the clot is prolonged into the uterine sinuses, constituting so many firm bonds of adhesion. The strength of this clot is only fully appreciated by those who have attempted to remove them.

Now in all these forms of hæmorrhage, occurring after the delivery of the placenta, but one course of *treatment* is called for. The hand should be passed into the uterus. In the first place its introduction will overcome any irregular contraction, for it should be passed through the hourglass, or any other irregular contraction, until it arrives at the fundus. Next, its presence as a foreign body will stimulate the uterus to expel it, and by so doing effect the desired result. Finally, with the hand we should break up the clots, and sweep them all out of the uterus and vagina. The uterus will then contract down to its proper size. It is then to be retained in that position, by the hand external to the abdomen, by the administration of ergot, &c.

The importance of this method of treatment is not generally acknowledged by practitioners, especially in the last form of hæmorrhage mentioned. Many hesitate upon breaking up these clots, which must be done again and again, as fast as they may form. It appears to many that a clot always serves to arrest a hæmorrhage, and so it does in perhaps every instance except in the hæmorrhage from the uterus after the delivery of the placenta. In this case, as I have attempted already to show, the bulk distends the uterus, and thereby forces open the uterine vessels which are closed, by withdrawing the clot, and the consequent contraction. It should be remembered, and it is generally lost sight of, by the physician, in his anxiety that the patient is as thoroughly bled, whether the blood be drawn into a bowl, is received into the bed clothes around her, or is clotted in the cavity of the uterus.

A most marked instance of the great importance of this method of treatment, occurred in a case in which I had been called in consultation, in consequence of some difficulty occurring in a breech presentation at a first delivery. The patient, a young woman, had been long ill, with intermittent fever, had an enlarged spleen, &c., and was delivered of twins, both breech

presentations. Some ten minutes after the labor was finished, and she had been carefully bandaged, &c., our attention was particularly drawn by a sudden vomiting, almost coincident with which a gush of blood from the vagina was heard. Ergot was given, cold applied to the abdomen, and contractions brought on to such a degree that the uterus was hard and firm under the hand, but larger than when it had contained the placenta. The contraction continued persistent; still she was faint, almost pulseless, covered with a cold sweat, and at intervals much worse. It was evident that the hæmorrhage was continuing internally, although none escaped. But one duty remained. Introducing the hand I swept out every clot, the uterus contracted to a proper size, no further hæmorrhage ensued, and the patient was saved, who, by any other mode of treatment, would have been lost.

In the remarks already made, it will be seen that I have omitted to speak of many methods of assistance usually enumerated, and this is because they are only adjuvants, perhaps of some little value in connection with other treatment, but not to be attended to to the neglect of the means already dilated upon. I will mention two of them. The bandage applied to the abdomen; compression of the descending aorta.

The bandage, or roller, applied generally after labor, is very often productive of more injury than benefit. In cases of severe flooding, it is generally inadmissible, and for the simple reason that it is in the way. Its presence prevents the manipulation of the abdomen, the application of ice, the douche, &c., and prevents the attendant from obtaining the very important information of the presence or absence of uterine contractions. There are some who hasten to put on the bandage after delivery, as if the life of the patient depended upon it. Nature puts no bandage upon the cow, or the sheep, and in the Lying-In Hospitals of Paris, the midwives put none on the women. The cows and sheep have no hæmorrhage, and out of some seven hundred women that I saw confined at l'hôpital des Cliniques, under the charge of Dubois, I did not see one solitary case of flooding.

A woman, after confinement, needs a bandage just as much,

or rather, upon the same principles, that guide its use in case of tapping for ascites. After all danger of hæmorrhage is passed, a bandage may be applied for support to the abdomen.

When properly done, it should be about half a yard wide, and applied much lower down than usual, the first pin should be placed at the lowest border, near the commencement of the upper third of the thigh. Over the uterus the pressure should not be great, but tighter above it, so that the result is, that the uterus is rather pressed down than upon.

Sometimes it is desirable to place a pad under the bandage, but this should not be upon the uterus, but above it, so as to prevent the uterus from expanding, while at the same time it affords some pressure upon the descending aorta, immediately before its bifurcation.

Compression of the aorta, is a form of treatment often more theoretical than practical, and where, from the thin habit of body, it is practical, it is of less value than would be supposed. In the cases where I attempted to put this suggestion in practice, I have found little benefit to flow from it.

New York, 141 East Thirteenth-street, May 1, 1855.

The Chemical Action of Galvanic Electricity on Organic Tissue.

Communicated to the National Institute, by Prof. STEINER of Baltimore.

In the treatment of paralysis, Golding Bird has shown that much good has resulted from the use of a *continuous* current of galvanic electricity. He proposed to avail himself of this, by blistering a portion of the surface of the paralyzed limb, and then applying a zinc plate on the part of the blistered surface nearest the spine, and a silver plate on the part most distant. These plates are to be connected by a copper wire. A feeble current is thus generated, flowing slowly and continuously. A

singular difference of effect was, however, noticed, as to the chemical action of the two plates on the skin of the patient. Under the silver plate, the sore produced by the blister was rapidly healed, while under the zinc plate a whitish appearance presented itself which soon resulted in the separation of a slough, circumscribed by the dimensions of this plate.

Bird's first knowledge of this fact seems to have been obtained, on the application of such a simple galvanic arrangement to a patient in 1847. The reporter of the case says, "we were not prepared to see a large slough separate from the sore to which the zinc was applied."

This chemical effect of galvanic electricity was noticed fourteen years prior to this, by Dr. Dunbar, a physician of Baltimore, then practising medicine in Winchester, Va. The Doctor, in experimenting on the corpse of a negro who had been executed in that town, noticed that the application of the positive pole of the battery produced a *whitening* or cauterization of the tissue wherever applied. This occurred in 1833, and an account was published of it at that time by this gentleman in the Baltimore Medical and Surgical Journal. The report says: * "I think it proper to notice, at this stage, a peculiar action of the galvanic fluid on the nerve and muscular fibre, observed by myself, and confirmed by one of the gentlemen assisting me. The positive pole, whenever it touched the nerve or muscle, produced an action or whitening very similar to that which is produced by lunar caustic, when applied to an exposed muscle." Prior to this period, there seems to have been no notice of the chemical action of the galvanic current on organic tissue,—and it is proper that the priority of the discovery should therefore be attributed to Dr. Dunbar.

The explanation of this effect has been given, however, very satisfactorily by Bird.† The serum which is effused on blistered surfaces contains chloride of sodium. The effect of the current is to decompose this salt, the metal being eliminated at the negative pole, where from oxidation it becomes soda, while the chlorine eliminated at the positive pole unites with the zinc and

* Baltimore Medical and Surgical Journal, I. 245.

† Bird's Electricity, 133.

forms the chloride of zinc, which is known to be a most active cauterly. The cauterization is slow, on account of the gradual formation of small particles of the caustic salt.

This contribution to the history of chemical science is made with the view of having the priority of discovery properly awarded.

PART III.—PROCEEDINGS OF SOCIETIES.

NEW YORK PATHOLOGICAL SOCIETY.

April 11. *Dr. Conant* presented *three tumors developed in the Brain*, with the history of the case, taken from the note-book of *Dr. Dewees*, the patient being under his professional care. In 1849, the patient applied to *Dr. Dewees* for treatment, suffering then from severe neuralgic pain, over the left orbital and temporal region. He has had syphilis ; and at the time of his application for relief, there existed an ulcerative discharge from the nasal cells and frontal sinus. His symptoms were relieved for the time by galvanism. He was very deaf in the right ear ; hearing was temporarily restored by eustachian-catheterization. Abscesses formed in the ear, attended by intense pain and profuse discharge, without external perforation of the membrana tympani, by perforating the middle lamina of the membrane, and finding exit through the contiguous integument, midway into the auricle. Several portions of carious bone passed through the posterior nares into the throat. In the following year he experienced a like attack, terminating in a similar manner, by discharge of pus. Some months subsequently, carious bone was discovered about the region of the eustachian tube. Deafness existed, which was temporarily restored, by removal of the bone. In February, 1852, he again applied to *Dr. Dewees* for the same trouble, and was relieved by the same means. Three months after, he suffered from symptoms probably caused by the passage of a gall stone. Two weeks after this, he was seized with tremors, attended by pain over the region of the liver—hepatic abscess was diagnosed. In ten days after, blood, and matter resembling pus, was discharged from the rectum, followed by immediate relief of symptoms. One year after this, June, 1853,

he was again seriously ill; and from the color of the skin, and expression of face, malignant organic disease was at first suspected; but Dr. Dewees finally concluded the brain to be the seat of disease, as for a long time anticipated, although unattended with cerebral pain, or disorder of the intellect. He suffered at the time, continual constipation of the bowels, the power of erection, voluntary and involuntary, was lost; fugitive strabismus, and spasmodic closure of the glottis, if the air swept over the face. In the following month, gradual loss of power of the left side, ensued; soon succeeded by hemiplegia, hiccough, spasmodic belchings; and increased reflex action now took place; and engorgement of the medulla oblongata was diagnosed. The paralysis was partially relieved, the patient being able to walk about, and use the left arm and hand at table. In February, 1854, a jelly-like substance, surrounding a piece of fecal matter, was submitted by Dr. Dewees to the microscope, and found to consist of granules, fusiform and other denominated cancerous cells. Disease of the pancreas was now pronounced upon. In March, a yellowish patch was thrown off from the stomach, and found filled with the *sarcina ventriculi*; these were apparently destroyed by the administration of hyposulphite of soda. Irregular diplopia and daz-zling of the sight occurred one month later. Then a most remarkable physiological exhibition was observed. The patient could place his right eye on another person, and by voluntary effort move the left eye in any direction, without changing the fixed position of the right eye. This phenomenon could be produced at any time for four days, when the power was gradually lost. On the 31st of May, he was attacked with pain in the side, as in 1852, accompanied by rigors, and the same diagnosis (hepatic abscess) pronounced. He died on the 24th of September. The faithfulness of the diagnosis of Dr. Dewees, will be best understood by description of the morbid condition, as revealed by the knife.

Post mortem examination thirty-six hours after death. Rigor mortis well marked on both sides, there being no apparent difference. Emaciation not extreme, nutrition nearly equal on both sides. The peritoneum was slightly congested. The intestines were small, and seemed much contracted, the villous coat denuded in patches. *Stomach* contracted, its mucous membrane injected, and somewhat softened. *Spleen* normal, *kidneys* quite congested. The *liver* contained in its large lobe, within two inches of its anterior border, a mass, which seemed to be concrete pus, about half an ounce, with slight induration around, and a small mark directly over this mass, resembling a cicatrix. Two other similar marks

were also observed. The organ was diminished in size. The *gall bladder* contained some fifteen concretions, stellate in form, black throughout, the size of an ordinary pea. The *pancreas* was quite abnormal, with internal red, pulpy softening, fatty, and of a peculiar, dark appearance. Adherent to its capsule, was a piece of rough bony matter, strangely developed in three distinct layers of tough, fibrous membrane. The analysis of this substance was as follows :—

Organic matter,	-	-	-	-	-	7.050
Phosphate of Lime,	-	-	-	-	-	77.520
Carbonate of Lime,	-	-	-	-	-	7.000
Magnesia,	-	-	-	-	-	1.600
Phosphate of Soda and Chloride of Sodium,	-	-				6.830
						<hr/> 100.000

Heart and Lungs normal, except some old pleuritic adhesions. *Head*: Upon removing the calvarium, the dura mater seems healthy only on the *left side*, at a point corresponding to the parietal eminence; it was there adherent to the bone, by a surface of an inch in diameter. At this position on the inner side of the dura mater, a *tumor* was found adherent, extending one inch into the substance of the brain; the adjoining portions being much softened. Another *tumor*, of the same size, also attached to the dura mater, was discovered on the *right side*, situated just above the petrous portion of the temporal bone. It extended so far into the substance of the organ, as to produce softening of the outer third of the crus cerebri, and consequently destruction of the *tractus opticus* of that side. In the *pons varolii* was another smaller tumor, situated at the lower part of the pons, slightly to the right of the mesial line. The softening, around this tumor, extended to the upper part of the medulla oblongata, impinging upon the floor of the left ventricle. The pituitary body was shrunken, and exceedingly soft. This condition was predicted by Dr. Dewees, who regarded the nutritive functions to be oppositely affected to those disturbances in cholera, where this body was uniformly found (by Dr. Conant) much hardened.

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Dr. Lattimore presented a *tumor* removed by him yesterday. It was situated in the throat, more attached to the left than the right side; no attachment posteriorly; and apparently developed between the two layers of mucous membrane of the soft palate. It had been growing for eighteen years; its progress was arrested for three years,

by the topical use of lunar caustic. During the last few years it has been increasing quite rapidly ; and attained such a size when first seen, as seriously to impede respiration and deglutition. Its removal was not attended with much difficulty ; the attachment on the left side was divided by a scalpel, and the operation completed by the finger. Dr. Isaacs placed a portion of the tumor under the microscope, and found it to consist principally of fibrous tissue, and it also contained a good many cells. He would not pronounce as to its nature, from the short examination made.

Prof. W. H. Van Buren exhibited an enormous specimen of *Exostosis*, involving the whole of the left *os innominatum*, taken from a patient in whom he had performed amputation of the hip-joint, for a similar disease of the *os femoris*, nearly five years before, and who had recently died.

The morbid growth had been reproduced in the acetabulum within a year after the amputation, although at the time of the operation it was perfectly healthy, as well as the head of the femur, which was also presented to the Society. Since the disease reappeared, it had continued to grow steadily and regularly until it had reached its present immense size and weight,—eighteen pounds. The patient died at a distance from the city, with obscure cerebral symptoms, not immediately connected with the present disease.

The particulars of this case were reported in full to the Academy of Medicine, soon after the patient's recovery from the amputation at the hip-joint, with wood-cuts representing the disease removed at that time (May, 1850), and the morbid specimens were presented at one of the meetings of this Society. The exhibition of the present specimen, therefore, completes the pathological history of the case.

In resuming the history of the case, from the period where the record in the Transactions of the Academy leaves it, there are but a few circumstances of importance to be noticed. The morbid growth spread from the acetabulum, where it first reappeared, until it gradually involved the whole bone. It pushed the soft parts before it, causing constant and sometimes severe pain, presenting everywhere an irregularly nodulated surface, very hard to the touch. It projected upward, until it came in contact with the lower ribs, and growing inwardly toward the median line, it encroached materially, toward the close of the patient's life, upon the pelvic and abdominal cavities, so as to interfere with the functions of the rectum and bladder. The patient used opium habitually to relieve his pain, but when

last seen by Dr. Van Buren, in the Spring of 1854, four years after the operation, his general health was still good; he ate and slept well, and was not losing flesh. Soon after this he left the city to reside in New Jersey, where he died in February, 1855. No accurate account has been received of the immediate cause of death, which seems to have been preceded by cerebral symptoms. Through the kindness of Dr. A. T. Pettit, of Long Branch, who examined the body, the specimen now before the Society was obtained.

"It is only by comparing together the three preparations, which comprise the whole of the femur, in two pieces, and the *os innominatum*, and which are now placed in their natural relation to each other, that the true nature of this extraordinary disease can be thoroughly comprehended. The first is a dried mass of bone, weighing eight and a half pounds, comprising a little more than the lower half of the *os femoris*, where it was sawn through at the first operation to which the patient was subjected, viz: amputation of the thigh, in May, 1848. This tumor had been growing for a period of sixteen years. It is a lamellated exostosis sprouting from the whole surface of the *os femoris* throughout its lower half, including its condyles and their articular surface.

"The second specimen is the remaining, or upper portion of the femur, with the reproduced disease growing from its lower extremity; this is preserved in spirits, and shows the attachment of the sciatic nerve to the bony growth by which it is surrounded, thus explaining the severe character of the pain, for the relief of which mainly, the second operation was undertaken. This is also a pure bony growth, or simple exostosis.

"The third and last is the huge mass, weighing eighteen pounds, and consisting of an osseous outgrowth from the *os innominatum*, and apparently from every portion of the surface of this bone. This recent preparation is evidently identical in character with the disease of the femur. It has been examined microscopically, by Dr. Isaacs and myself, and the only histological elements which it contains, are those of true bone and fibrous tissue. At one point striped muscular fibre was found in the interior of a cancellated bony nodule corresponding in position to the dorsum of the ilium; this was supposed to be a portion of the glutei muscles included in the bony growth, and not yet deprived of its characteristic appearance. [Drawings of these microscopical appearances were submitted by Dr. Van Buren.]

"The surface of this tumor is covered by a layer of tissue varying in thickness at different points from the fraction of a line to half an

inch and more. This is nothing more than periosteum ; under the microscope, it consists of white and yellow elastic fibrous tissue only. When I first examined the specimen from the femur, seven years ago, I was under the impression that this contained cartilage cells; but in this specimen there are no cells of any kind whatever, except those which characterize the processes of exudation and transition, as met with in the reparative process, and in benign growths.

“The specimens before the Society, therefore, are simple exostosis, or bony outgrowth; and there is nothing in their histological character which warrants any suspicion of cancer, although the disease was so often reproduced.”

Dr. Stephen Smith then presented a specimen of *Rupture of the Bladder*. Mr. McA——, æt. 38, Irishman, of very intemperate habits, was admitted to the wards of the second surgical division of Bellevue Hospital, April 7th, 1855. From his previous history it appears that on the evening of the 3d inst., while intoxicated, he received a kick in the lower part of the belly, which gave rise to severe pain, and an immediate and ineffectual effort to pass water. He threw himself upon the floor, complained bitterly of pain in the lower part of the abdomen, and accused his antagonist of killing him. He passed a wretched night, alternately lying down and rising to pass his urine. On the following morning a dispensary physician was called in, who found him dressed and sitting up, and complaining only of the retention of urine. His pulse was natural, and his general symptoms not indicative of any serious injury; the hypogastrium gave evidence of no unusual distention of the bladder, and there was no marked tenderness of the abdomen. Not having a catheter with him, the physician directed McA. to go to the dispensary at the surgeon's hour, and have the water removed by a catheter. He went accordingly, a distance of nearly half a mile, leaning upon the arm of his wife, and walking in a semi-erect attitude. The surgeon drew off nearly a pint of clear urine. This operation gave considerable relief to his most urgent symptom, and he returned home with much greater ease, walking nearly erect. During the day he began to suffer from irritability of the stomach, retching and vomiting, and succeeded in passing voluntarily some bloody urine. He passed a restless night, the vomiting now being the severest symptom. During the second day he continued vomiting, but passed his urine in small quantities. On the morning of the third day the dispensary physician again visited him, and drew off his water. He was complaining only

of excessive vomiting. During the third and fourth days he continued to vomit, but passed his water in sufficient quantities to relieve his distress.

On entering the hospital, he was in a very prostrated condition, and complained again of retention of urine. A catheter was readily passed, and removed about a pint of water, which relieved him. On the following morning, he suffered greatly from irritability of the stomach, but had again succeeded in voluntarily relieving his bladder of its contents. There were no external marks of injury, and no marked tenderness over the abdomen, which was, however, tympanitic. His water was drawn off in the evening with the catheter, in less quantity than before. He was in a very low condition, and died during the night.

On making a post-mortem examination, a gallon or more of serous fluid, having no urinous odor, was found in the peritoneal cavity. There were no signs of inflammation in the abdominal cavity, no plastic exudation, or even unusual injection of the peritoneum. The bladder was found firmly contracted, having a vertical rent in the centre of the superior part of its posterior wall, an inch in length, involving all its coats. The opening was patulous, leaving the passage from the cavity of the bladder to the peritoneum perfectly free. The mucous membrane of the bladder partially filled the rent; the peritoneum surrounding the rupture was somewhat injected, and the mucous membrane of the bladder exhibited several ecchymosed patches. No other morbid appearances were observed in the body.

Dr. Markoe referred to a case of *Ulcer of the Tibia*, presented by him some time ago. He wished to complete its history—it was undoubtedly malignant, the disease having reappeared in the groin.

AMERICAN MEDICAL ASSOCIATION.

The eighth annual meeting of this body was held at Philadelphia, according to the notice given, commencing its session on the first of May, and continuing to sit four days. Though not able to be present, we have received very full accounts of the proceedings from various friends who were there, and had prepared a very full synopsis

for the MONTHLY.* This we feel compelled to exclude, in consequence of the pressure on our pages, contenting ourselves with the insertion of the speech of the President, Dr. Pope, of St. Louis, and which is of more than passing interest, and of some lines written by Dr. Holmes, of Boston, and circulated among the members, and for which we are indebted to the Boston Journal. There were many things of interest said and done, and a very marked absence of unpleasant jars. Dr. George B. Wood was made president for the ensuing year, and an excellent selection it was, and Detroit was chosen for the place of the next meeting. Nashville pressed very hard for it, but in vain, but we hope, and have no doubt, that their next attempt will be successful.

Of the hospitality, both public and private, of Philadelphia, all speak with delight, and agree that no effort was spared to make the occasion what it most decidedly was, a delightful reunion.

The President, Dr. CHARLES A. POPE, being called upon, delivered the annual address, as follows :—

Gentlemen : With feelings of grateful pleasure, I meet you, and greet you, on this occasion.

For high and useful purposes, have we assembled from the wide extent of our beloved country. The elevation of a noble profession—the promotion of science—the good of humanity—these have been, are, and will continue to be, the objects of our Association. Whether we have, thus far, done much or little, our sole aim has been the advancement of the best interests of our fellow men. I shall not assert that we have done as much as we might have done, or that the course hitherto pursued by us, is so perfect, as to admit of no improvement. Were such the fact, and were the Association a firmly established institution, I might have experienced more hesitation in the selection of a theme for the present occasion. And since we can not, as yet, I think, urge such a claim, the few suggestions which I shall offer, are made with becoming diffidence, but at the same time with a deep sense of their importance to the welfare and perpetuity of our Association.

Some strictures on our proceedings, in medical and other journals, have appeared within the last year, as well as in previous years. I shall not here blame the authors of them. They are, doubtless, as proud of our noble profession as we, and equally with us, anxious for the advancement of its interests and its honor. I thank them for their suggestions. All of us are ready to hear them and to profit by them. If any more effectual mode of arriving at truth can be devised,

* To the New Jersey Reporter we are also indebted for a proof sheet containing its record of the meeting. Will the editor accept our thanks for the attention.

than that which we have heretofore pursued, all of us are ready to follow it, and would rather thank than quarrel with those who may propose it.

Physicians have an almost superhuman mission to fulfil. The goal of their ambition, and their hopes, and their duty, stands at the *ultima thule* of human capacity—nay, rather beyond it. It cannot, indeed, be said, that their duties are beyond their powers, but their ambition, their hopes, their wishes, certainly are. They would gladly know, not only all the secrets of organization, but those also of physiology, pathology, and therapeutics. To arrive at such knowledge, is, perhaps, beyond the attainment of the human mind. Multiform are the elements which enter into the problem of health and disease. Health is, itself, a constant change of composition—diseases are ever-varying changes, supervening on this.

Do we know, with all our advancement, and after all the toil of our predecessors for two thousand years, the exact changes in which any disease, the fevers for instance, consists? And even when we shall have learned these, so as to understand them as well as the most ordinary chemical changes, the ever-varying character of most diseases, and the inward disturbing influences upon them, of the mental and moral emotions, would require to follow them, a continued stretch and power of intellect, of which it is doubtful if man be capable. This exactness of knowledge is not, I grant, necessary to the very successful practice of medicine. Our profession can render great and important services to man without it, but with it, it would be still more serviceable. To it our ambition tends. To this perfect knowledge we aspire. Although we may never reach, we can yet eternally approach it. In the vast region of our researches, there is no probability that human genius will ever, Alexander like, weep for the want of unconquered provinces. Beyond the conquests of the future heroes of the profession, there will always be a boundless field for the ambitious and philanthropic explorer. In the language of a Western student, "the science of medicine, like the liver of Prometheus, is sufficient to glut the eagles of all time."

The object of this Association is to do something to advance the profession toward the far-distant goal of perfection—to aid the solution of some of the problems and enigmas of life and organization—to add some material to the growing temple, whose foundations were so firmly laid by the Coan sage—and to do its part, as best it may, in the cause of humanity. Nor do I think that, so far, it has altogether failed. Many valuable contributions to science have been elicited—professional ambition has been stimulated—an *esprit de corps* has been successfully evoked and established. The strength of the profession has acquired additional power by the union of its members. This Association has been to physicians, what the railroad and electric wires are to commerce, and the interchange of useful knowledge to States and nations. It has made us one, and as I have just remarked, in unity there is power. This Association has stimulated thought. Chaotic and void, would forever remain the masses of facts,

accumulated by the observations of ages, but for the coördinating and logical power of reason. It sits in judgment on the silent phenomena, as a "refiner of fire, and a purifier of silver." It forces the voiceless facts to mount the tripod of the oracle, and speak forth words of wisdom. The scalpel, the crucible, the microscope, may be subsidiary to its purposes and ends, but they cannot supply its place. Fixed and patient thought, in medicine, as in other departments of science, is the Aladdin's lamp, that lights the footsteps of the discoverer. To stimulate the attention and thought, is to accelerate many a new discovery—to hasten the advent and establishment of important principles yet in the womb of the future. May not our Association do this more effectually than it has hitherto done?

Let all the contributions be read and attentively considered. Such a course would certainly be more encouraging, as well as more respectful, to their authors. Let the reports be deliberately and fully discussed, and let them go forth to the world with the sanction or criticisms of the Association. This would require time, it is true, but if we have time to meet at all, surely a few days would make but little difference. The good that would be effected, would yield a tenfold compensation for the time employed. Every one must admit that three or four days is too short a time for the Association rightly to fulfil its annual mission.

I would, moreover, respectfully suggest that time be taken for the discussion of some of the leading topics of medical philosophy. Among these, may be mentioned the nature, causes, and treatment of cholera, yellow fever, *et cetera*—hygiene, and the laws of health affecting masses of men—quarantine—the causes of mortality among children—the chemical and vital doctrines of life. Questions like these, indicated a year in advance for discussion, would excite a carefulness of investigation, and a degree of attention and thought which could not fail to clear away much of the darkness and doubt in which they are yet shrouded. Nothing so sharpens the intellectual powers as public debate. It fixes attention, and strains to the utmost every faculty. I have no hesitation in saying that facts enough have been accumulated to establish great and general principles, of which the medical world is yet in ignorance or doubt. Nothing would contribute more to demonstrate these principles than the collision of matured intellects in public debate. What a mass of facts, and argument, and demonstration, would be brought to bear, on any of the subjects alluded to, if some of the best minds in the profession were to debate them, after a year's preparation! Observed facts are the crude materials of science—the intellect is the master builder of its august temple.

I make these suggestions for your consideration. All the scientific meetings in this country and in Europe, employ more time than ours has hitherto employed. Evidently we must protract our sessions, if we would render them as serviceable to science as they may be. No member of the Association will be required to remain longer than suits his wishes or convenience. Some fifty or sixty, more or less,

would always be found to listen with eagerness to scientific papers, and engage with pleasure in scientific discussions.

The time has probably arrived, for a change in our plan of organization, which will admit of the selection of a permanent place for the future meetings of the Association. There are evident advantages incident to both the migratory and stationary plans. These might, perhaps, be easily reconciled, and secured. A proposition, if I mistake not, was made, some years ago, by the Smithsonian Institution, and I would respectfully suggest, whether it would not be in accordance with the best interests of the Association, to hold biennial meetings in Washington, and the alternate ones, as now, at different points of our common country. We might thus secure all the advantages of a fixed abode, in the way of preserving the archives, making collections, etc., while by meeting in various localities, we could not fail to excite that wide-spread interest among the profession, and obtain such accessions of new members as would greatly enhance the high and useful objects of our Association. Should this proposal meet with your approbation, I would further intimate that policy would perhaps require the meetings of the Association at the national capitol, to be held in the years of the short sessions of Congress.

I shall say but little of the legislative duties of the Association. I shall say nothing of the propriety or impropriety of getting laws passed to regulate the practice of medicine, and furnish standards for candidates for the Doctorate. Perhaps the Association can do but little in this respect. Ours is a popular government, and the people are disposed to allow the largest freedom in everything pertaining to medicine, medical schools, and physicians. Laws passed against quackery one year, are revoked the next. Our country is the paradise of quacks. All good things have their attendant evils, and this unbridled liberty is one of the evils of a popular government. May we not hope, however, that even this evil may disappear, as general education and the cultivation of the masses advance? At any rate the people are not yet disposed to put down the quacks, nor to require too high a degree of qualification for those of the regular profession. After all, laws can make only mediocre physicians. They can require the candidates to know only so much—to be qualified to a certain degree; and this degree will always be far lower than that to which the true lovers of knowledge would attain, without any legislation on the subject. The greater lights of the profession cannot be manufactured after any process of legislative enactment. Thirst of knowledge, self-love, philanthropy, burning ambition—these make the great physician and surgeon. These have made all the worthies of the past—not legislation. Legislation cannot drive the drone to the proud heights of professional eminence. When these heights are reached, it will be seen that the successful aspirant has been stimulated by a stronger power.

To him the laurel blossoms of renown and the life-giving mission of his art, are dearer and more attractive than was the mystic bough of

the sibyl, to the eager Æneas, or, than the golden apples, guarded by sleepless dragons, to the Hesperian daughters.

Whatever course you may think proper to pursue, I am sure that your objects will be, the advancement of science—the good of mankind—the honor and glory of the profession. We have the dignity and character of a noble calling to sustain—of a profession which has numbered, for two thousand years and more, some of the wisest and best men in all countries and all times. It is no trivial matter to sustain the rank and respectability of a vocation which can boast of a Hippocrates, a Harvey, a Hunter, of the most erudite and beneficent of sages and philanthropists the world ever saw—of a profession which has furnished to every nation its *clarum et venerabile nomen*.

On the eve of the battle of the pyramids, Napoleon exclaimed : Soldiers ! from the height of yon monuments, forty centuries look down upon you. Gentlemen, from the heights of past ages, countless worthies of our godlike profession point, and beckon to a goal more elevated than that which attracts legislators and conquerors, Solons and Cæsars.

On motion of Dr. J. B. Biddle,

Resolved, That the thanks of the Association are unanimously tendered to the President, for the able and eloquent address just delivered ; also, that a copy be obtained for publication.

The following are the stanzas, by Dr. O. W. HOLMES, before alluded to :

A TRIPLE health to Friendship, Science, Art,
From heads and hands that own a common heart !
Each in its turn the others' willing slave ;
Each in its season strong to heal and save.

Friendship's blind service, in the hour of need,
Wipes the pale face—and lets the victim bleed.
Science must stop to reason and explain ;
Art claps his finger on the streaming vein.

But Art's brief memory fails the hand at last ;
Then SCIENCE lifts the flambeau of the past.
When both their equal impotence deplore—
When Learning sighs, and Skill can do no more,
The tear of FRIENDSHIP pours its heavenly balm,
And soothes the pang no anodyne may calm !

PART IV.—CHRONICLE OF MEDICAL PROGRESS.

[Translations from the German, under this head, are made by Dr. H. N. Bennett.]

Miasmatic Intermittent and Remittent Fevers; use of the Sulphate of Cinchonia as a Succedaneum for the Sulphate of Quinia. By Dr. VAHU. Translated for the MONTHLY, by P. F. C. DESLANDES, Bachelier ès Lettres.

Mr. A. Delondre, the distinguished chemist, having been informed of our approaching departure for Algiers, that classic land of miasmatic endemo-epidemics, offered to give us a certain quantity of sulphate of cinchonia, prepared by himself, in order that we might, when the occasion should present itself, use this alkaloid and compare its action to the well known action of its congeners.

This is the way M. Delondre argues: Before the discovery and insulation of quinia, the grey quina of Loxa was used in preference, to combat intermittent fevers and attacks of malignant fevers, and the results were nearly the same as those obtained since with the sulphate of quinia. Only it was more difficult to administer to the patient a dose, always large, of powder of quina, than it is in our days to make them swallow a few pills of a concentrated solution of sulphate of quinine. Now in the grey quina of Loxa, so much used during the first quarter of this century, the active principle was undoubtedly Cinchonia, since chemical analyses have taught us later that grey quina contains a large relative proportion of cinchonia and very little quinia, whilst this predominates in the yellow bark.

At the time of the discovery of cinchonia, the learned and venerable M. Bally, physician of the Hotel-Dieu, a sagacious and distinguished experimentalist, tried to combat ague with the sulphate of that alkaloid, and obtained, in the intermittent fevers of Paris, a success which proved to him that $4\frac{1}{2}$ or 6 grains of it sufficed often to prevent the return of the attacks. Why the sulphate of cinchonia was soon abandoned for the sulphate of quinia we do not know; perhaps the use of cinchonia was not persevered in long enough. However it be, exclusive preference was given to the sulphate of quinia, a preference which, after the results we have obtained, seems to have been tainted with a little partiality. A more thorough investigation ought perhaps to have been made, in order the better to ascertain whether the effects of the sulphate of quinia, a medicine always very expensive,

were in reality superior to those of the sulphate of cinchonia, a much cheaper remedy.

We have then accepted with joy the disinterested offer of M. Delondre, and without desiring to give too premature a judgment upon anything, we state, even now, that, from what we have seen in Africa, we consider the sulphate of cinchonia a succedaneum provided by nature itself for the sulphate of quinia.

We are aware that many eminent men will say : as regards cinchonia, the question is settled ; the preference given for so many years to the sulphate of quinia shows enough its superiority. We will answer that one day (not very many years ago) it was maintained that carriages could be moved by steam, when a member of the Institute, very learned otherwise, asserted, basing his views on theories which seemed irrefutable, that the wheels of a locomotive could revolve on themselves, but never could describe a cycloid, and therefore steam locomotion could not be applied to railroads. Since then practical men have answered the illustrious theorist, who is obliged to travel 60 miles an hour when he goes on a journey.

We say then that the use of cinchonia in the treatment of fevers is to be tried by practical men, advantageously situated for that purpose. We say advantageously situated, for the results of the use of this remedy are really conclusive only when they are obtained in countries subject to miasmatic fevers, such as Algiers, for example ; and because we, who have practiced medicine in Paris for fifteen years, declare that we shall not receive as peremptory trials those made on fever patients in Paris ; for there we have no miasmatic ague, and the intermittent fevers of the capital may be arrested and cured by a simple medication, and in the majority of cases without the use of the sulphate of quinia.

We leave our readers to judge of the use we have made of the sulphate of cinchonia in cases of intermittent and remittent fevers in Africa. We give thirteen cases, which might already appear conclusive, but we do not wish to be accused of being too hasty in our judgment ; here we can experiment largely and continually. We live in a town of the province of Algiers (Cherchel) where the population is subject during the whole year to miasmatic fevers, but particularly from July to November ; colonial villages very near us furnish us besides with a very large number of ague patients. On one side we have acted with the greatest prudence in order not to incur the reproach of endangering the life of the patients, by using a remedy uncertain in its effects ; and on the other side we have acted with

the greatest possible certainty, in giving cinchonia only in well marked cases ; therefore we have given it particularly to patients attacked for the first time, and whose constitution was not yet deteriorated by the saburral condition which accompanies ague in almost every case. Here the sulphate of quinine, given for eight successive days in very large doses (15 grains and more every 24 hours), produces absolutely no effect, if the treatment has not been begun by an emetic or a purgative. We have here numerous examples of what we advance, in patients who wished to treat themselves without calling a physician, and who imagined they had only to swallow pills of sulphate of quinia to be cured.

As soon as the primæ viæ are cleared, the sulphate acts ; we have then placed ourselves, as regards the administration of the salt of cinchonia, absolutely in the same relative position as when we have used the sulphate of quinia.

To abbreviate as much as possible our remarks, we have not spoken of the diet. We must then say once for all that our fever patients are always ordered to take the most nourishing and most tonic food ; they eat as much as they like of meat, fish and vegetables, and drink about the third of a pint of wine a day.

One word more, as regards the meaning of the word *succedaneum*, as understood by some physicians, who pretend that a medicament can be called *succedaneum* only when it acts after the specific remedy has failed. It seems to us that to mention such an opinion is to refute it.

CASE I.—*Quotidian Fever*.—11 o'clock in the morning. N——, laborer at Cherchel, has had two fits of fever, which lasted from 11 o'clock in the morning till four o'clock in the afternoon. The three intermissions nearly equal. Treated the 20th of September, 1853, the third day of the disease. Marked gastric disturbance.

Sept. 20th, at 8 in the morning : Emetic ; Ipecac. gra. xv. ; tartar emetic, gra. jss. No exacerbation. The 21st : gra. xii. of the sulphate of cinchonia, in the form of aqueous solution, at 7 o'clock in the morning. The exacerbation precedes the usual hour. Chills at half past 9 as violent as the preceding ; vomiting follows the exacerbation. The heat is not so great and lasts a shorter time than the preceding day ; no sweat. The 22d : gra. xii. at 5 o'clock in the morning ; no exacerbation, no heat, no cephalalgia. The 23d ; gra. xii. at 5 o'clock in the morning ; nothing to record, no chills, no heat, no cephalalgia. The 24th : gra. ix. at 5 o'clock in the morn-

ing: nothing to record. The 25th: more cinchonia; wine of gentian as a tonic (Extract of gentian ℥j.; red wine, ℥ij. $\frac{1}{3}$). No return of the exacerbations and the patient resumes his work.

CASE II.—*Remittent Fever*.—B——, gardener in the neighborhood of Cherchel, has been ill several days, cannot tell exactly the period of the first invasion of the disease. Treated for the first time, September the 29th, 1853. Marked gastro-intestinal derangement. The 29th: Ipec. gra. xv.; tartar emetic, gra. jss. The 30th: Sulphate of soda, ℥ij. Oct. 1st, at 8 o'clock in the morning: gra. viiss. of sulphate of cinchonia; the dose repeated at 11, and at 2 o'clock in the afternoon. Exacerbation at 4 o'clock in the evening; it is not so strong; cephalalgia less violent. The fit lasts only two hours instead of four.

Oct. 2d: gra. viiss., repeated three times, and at the same hours as the day before. A little cephalalgia only from 4 to 5 in the evening. Oct. 3d: gra. viiss. at 8 o'clock in the morning; at 3 o'clock in the evening, gra. xii. Cephalalgia at 8 o'clock in the evening; it lasts the whole night. No tinnitus aurium, notwithstanding the xixss. grains taken. Oct. 4th: on account of the cephalalgia, which lasted all night, given gra. viiss. of the sulphate, at 5 o'clock in the evening; and gra. xii. at 8 in the evening. At 9 o'clock in the evening, slight headache, which lasts half an hour; perspiration, which continues for three hours; no tinnitus aurium.

Oct. 5th: gra. xv. of the sulphate, at 3 o'clock in the evening; no exacerbation, no cephalalgia; sleeps well the whole night. Oct. 6th: gra. xv. at 3 o'clock in the afternoon; at 9 o'clock in the evening, cephalalgia with tinnitus aurium; heat that lasts one hour; no chills; sleeps all night. Oct. 7th: xx. gra. at 3 o'clock in the afternoon; nothing to record. Oct. 8th, 9th, 10th, 11th, and 12th, nothing.

CASE III.—*Tertian Fever*.—Days constant, 8 o'clock in the morning. B——, farmer, has been in Africa for two years, had, six months ago, a quotidian fever, treated by sulphate of quinia, and cured; has had three exacerbations before the treatment began, on the 6th of October, 1853.

Oct. 6th: vi. gra. of sulphate of cinchonia, at 4 o'clock in the morning; at 9, one hour after the usual time, heat for one hour, followed by abundant perspiration; sleeps from 11 o'clock in the morning till 12; no traces of exacerbation. Oct. 7th: at 4 o'clock in

the morning, xv. gra. of sulphate of cinchonia ; no exacerbation ; no cephalalgia. The sulphate was given that day, on account of the gravity of the exacerbation of the day before, lest the fever should become remittent. Oct. 8th (day of exacerbation): at 4 o'clock in the morning, vii. gra. of the sulphate ; no exacerbation. Oct. 9th : nothing. Oct. 10 : vi. gra. at 4 o'clock in the morning ; no exacerbation. Oct. 11th and 12th, nothing.

CASE IV.—*Quotidian Fever*.—10 o'clock in the morning. L——, carrier, relapse, has been treated for the same disease, from the 10th to the 27th of September, with sulphate of quinia. Treated for the first time by us, October 7th, 1853. Marked gastric derangement. Draught composed of Ipec. gra. xv., tartar emetic gra. jss. Oct. 8th: at 6 o'clock in the morning gra. xii. of sulphate of cinchonia. From half past 3 o'clock in the afternoon till 7 in the evening, great cephalalgia, no heat of the skin, no sweat. Oct. 9th : at 11 o'clock in the morning gra. xv. of the sulphate, no exacerbation, no cephalalgia. Oct. 10th : cephalalgia from 6 to 8 in the morning ; xv. gra. of the sulphate at 11 o'clock in the morning ; cephalalgia less intense than the preceding days, from 4 to 6 in the morning ; no heat, no sweat. Oct. 11th : gra. viiss. at midnight, and gra. viiss. at 2 o'clock in the morning ; cephalalgia less intense than the preceding days, from 4 to 6 o'clock in the morning ; no heat, no sweat. Oct. 12th : gra. viiss. at midnight, as much at 2 in the morning ; nothing. From the 13th to the 20th of October, nothing.

CASE V.—*Tertian Fever*.—Days constant, 7 o'clock in the morning. D——, muleteer, has never been sick since his arrival in Africa. Three exacerbations before treatment. Twice the fever came on at 7 o'clock in the morning, and left at 2 in the afternoon ; the third exacerbation commenced at 4 in the morning.

The three stages are well characterized ; no continued cephalalgia. The patient has had recourse to no treatment. Oct. 12th : gra. xv. of sulphate of cinchonia, at midnight. Complete absence of exacerbation. Oct. 13th, nothing. Oct. 14th : gra. xv. at midnight ; no exacerbation. Oct. 15th, 16th, 17th, 18th, 19th, and 20th, nothing.

CASE VI.—*Remittent Fever*.—Marked chills at 2 o'clock in the afternoon. A——, farmer, has never been ill during eighteen months ; that he has lived in Africa. Three days ago he was attacked with remittent fever, accompanied with obstinate cephalalgia. Oct. 16th :

at 9 o'clock in the morning, draught composed of Ipec. gra. xv. and tartar emetic gra. jss., to combat a well marked saburral condition; at 11 o'clock in the morning of the same day xv. gra. of the sulphate of cinchonia, which are almost immediately thrown up by the efforts at vomiting induced by the Ipec. I had prescribed cinchonia, to be administered only after the effect of the emetic had passed off entirely. The exacerbation, characterized by chills, comes on at 45 minutes past 1 o'clock in the afternoon; the cephalalgia, less violent than the preceding day, continues the whole of the day and night. Oct. 17th : gra. xv. at 11 o'clock in the morning ; no cephalalgia, no chills. Oct. 18th : gra. xx. at 11 o'clock. Nothing. Oct. 19th : gra. xx. at 11 o'clock. Nothing. From the 20th to the 24th of October, nothing.

CASE VII.—*Remittent Fever*.—R——, farmer, had, two months ago, irregular fits of fever, which he treated by pills of the sulphate of quinia ; has not felt anything since that period. Three days ago, he was attacked with remittent fever ; treated for the first time, Sept. 21st, 1853. Sept. 21st, on account of the concomitant gastric disturbance, given a draught composed of Ipec. gra. xv. and tartar emetic gr. jss. Cephalalgia not so great. Sept. 22d : at 8 o'clock in the morning, gra. xii. of the sulphate of cinchonia; little cephalalgia until 3 o'clock in the afternoon, when it increases, and lasts until the 23d, at 6 in the morning. Sept. 23d : gra. viiss. at 8 o'clock in the morning, and viiss. at 3 o'clock in the afternoon. Slight cephalalgia from 4 to 6 o'clock in the evening. Sept. 24th : gra. viiss. at noon ; no headache, no heat. Sept. 25th : gra. viiss. at noon ; nothing. From the 26th to the 30th of September, nothing.

CASE VIII.—*Tertian Fever*.—Days not constant, 1 o'clock in the afternoon. Diarrhœa as complication. B——, gardener, has had diarrhœa for a month. The fever is characterized by five exacerbations, which lasted from 1 o'clock in the afternoon till 6 o'clock in the evening. The period of heat is longer than the two others. Sept. 20th : ʒj. sulphate of soda, at 8 o'clock in the morning. Sept. 21st : gra. xii. of sulphate of cinchonia, at 9 in the morning ; the exacerbation occurs at half past 1 in the afternoon, half an hour later than usual. The sweat is less abundant, and that period of the fit lasts a shorter time than usual. The exacerbation is quite over at 5 in the evening. Sept. 22d : nothing to record. Sept. 23d : xii. gra. of sulphate of cinchonia, at 9 o'clock in the morning ; exacerbation

at 10 o'clock in the morning ; it begins with the heat, and ends by a great perspiration, at a quarter past 11 ; duration, one hour and a quarter ; comes on three and a half hours sooner. Sept. 25th : gra. xii. at 3 o'clock in the morning ; no exacerbation at 1 in the afternoon, the usual time of the fever ; a slight cephalalgia, which lasts one-quarter of an hour ; since then, nothing ; a good night. Sept. 27th : gra. ivss. at 3 in the morning ; nothing. From Sept. 29th to Oct. 6th, nothing. Oct. 7th : at 1 o'clock in the afternoon, violent cephalalgia until 5 in the evening. Oct. 8th : cephalalgia immediately after the administration of the xii. gra. of sulphate of cinchonia, at 9 o'clock in the morning ; it lasts an hour. Oct. 9th : xii. gra. at 5 o'clock in the morning ; cephalalgia from 1 o'clock in the morning till 8. Oct. 10th : gra. xii. at 5 in the morning ; nothing. From the 11th to the 18th of October, nothing.

CASE IX.—*Tertian Fever*.—Days constant, 11 o'clock in the morning. G——, shoemaker, three exacerbations before the treatment ; three well characterized stages ; total duration, from 11 o'clock in the morning till 4 o'clock in the afternoon ; from that moment no cephalalgia. Sept. 21st : \mathfrak{z} jss. of sulphate of soda, to remedy the gastro-intestinal derangement. Sept. 22d : gra. xii. of sulphate of cinchonia, at 9 o'clock in the morning. At 11 o'clock a little cephalalgia ; no heat, no sweat. Sept. 23d : nothing to record. Sept. 24th : gra. xii. at 7 o'clock in the morning ; no exacerbation. Sept. 25th : nothing to record. Sept. 26th : gra. xii. at 7 in the morning ; no exacerbation. Sept. 27th, 28th, 29th, and 30th, nothing.

CASE X.—*Remittent Fever*.—F——, farmer, had, two years ago, for ten days, a remittent fever, for which he was treated with pills of sulphate of quinia. Sept. 21st : \mathfrak{z} jss. of sulphate of soda. Sept. 22d : the tongue remains white, and the coating is as thick as the day before. Ipec. gra. xv. and tartar emetic jss. gra. Sept. 23d : gra. xii. of sulphate of cinchonia, at 5 in the morning ; thrown up immediately. Cephalalgia the whole of the day. Sept. 24th : gra. xii. at 5 in the morning ; tinnitus aurium at 8 o'clock in the morning ; chills at three o'clock, and until 4 o'clock in the afternoon ; no heat ; cephalalgia from 4 o'clock throughout the night. Sept. 25th : gra. viiss. at 5 o'clock in the morning, and gra. viiss. at 11 o'clock in the morning. Sept. 26th : constant headache during the whole of the 25th, but it is not so great to-day. Spent a tolerably good night.

Sept. 26th : in the morning there is less cephalalgia. Sept. 27th : gra. viiss. at 5 in the morning, and repeated at 11 in the morning. The headache is decreasing in intensity ; no chills, no heat, no sweat. Sept. 28th : gra. vi. at 11 o'clock in the morning ; nothing. Sept. 29th : gra. vi. at 11 o'clock in the morning ; nothing. Sept. 30th, and Oct. 1st and 2d : gra. vi. at 11 o'clock in the morning ; nothing. Oct. 3d : wine of extract of gentian. Oct. 4th : cephalalgia from 2 o'clock in the afternoon till the next day. Oct. 5th : gra. vi. at 11 o'clock in the morning ; cephalalgia from 2 o'clock in the afternoon till 6 o'clock in the evening. Oct. 6th : gra. viiss. at 11 o'clock in the morning ; cephalalgia from 3 till half past 4 in the evening ; not so intense as that of the day before. Oct. 7th : viiss. at 11 o'clock in the morning ; nothing. From the 8th to the 15th of October, nothing.

CASE XI.—*Intermittent Fever*.—D——, political exile, at Cherchel, carried on the trade of a joiner, when in France ; has never been sick for twenty months, that he is in Africa. Attacked with fever Oct. 6th, 1853. The first exacerbation was ushered in by chills ; the following days a continual heat, greater at 5 o'clock in the morning, and lasting until the next morning, with the same intensity. Has, before treatment, twice taken emetics, which produced abundant vomitings, and twice gra. viiss. of sulphate of quinia, on the 10th and 11th of October. Consulted me on the 16th of October ; marked gastric disturbance, which calls for Ipecac gra. xv. and tartar emetic gra. jss., given at 8 o'clock in the morning. At noon, cephalalgia ; at 5 o'clock in the evening, heat, until 7. Remission until midnight ; at midnight, heat and cephalalgia until 5 in the morning.

Oct. 17th : gra. xii. of the sulphate of cinchonia, at 8 o'clock in the morning. At noon, slight cephalalgia, followed by abundant sweat ; at night, no thirst, but constant watchfulness, without chills, nor heat, nor sweat. Oct. 20th : gra. xii. of the sulphate, at 8 o'clock in the morning ; nothing. From the 21st to the 30th of October, nothing.

CASE XII.—*Quotidian Fever*.—6 o'clock in the evening. V——, terrace-maker, has been in Africa four months ; was attacked with dysentery in the month of August, 1853 ; was then ill for eight days ; attacked with quotidian fever on the 24th of October ; he has had six exacerbations, has consulted me only on the 30th of October. Oct. 30th : marked gastric intestinal derangement. Emetic, com-

posed of Ipecac and tartar emetic. Oct. 31st : ʒij. of sulphate of soda, in the morning ; gra. xii. of sulphate of cinchonia, at 2 in the afternoon ; no exacerbation. Nov. 1st : gra. xii. of sulphate, at 2 o'clock in the afternoon ; still no exacerbation. Nov. 2d and 3d : gra. viiss. of sulphate, at 2 in the afternoon ; nothing. Nov. 4th, 5th, 6th, 7th, and 8th, nothing.

CASE XIII.—*Tertian Fever*.—Days constant, in October. Days not constant, in November. Exacerbations at 6 o'clock in the evening. B——, farmer, was attacked with tertian fever, Sept. 30th. The fever lasted eight days. Took, then, sulphate of quinia, and felt well for three weeks. Attacked with tertian fever Oct. 30th ; did not this time take any sulphate of quinia ; consulted me only on the 4th of November, after two complete exacerbations. Nov. 4th : gastric derangement. Draught composed of Ipec. and tartar emetic. Nov. 5th : the exacerbation is expected at 6 in the morning ; xii. gra. of the sulphate of cinchonia, at 2 o'clock in the morning. The exacerbation comes on at 5 in the morning ; it is not so strong as the preceding day, the cold stage especially ; the period of sweat less prolonged ; it is all over at 9 o'clock in the morning. No cephalalgia. Nov. 6th, nothing. Nov. 7th : gra. xii. at midnight ; no exacerbation. Nov. 9th : gra. xii. at midnight ; nothing. Nov. 15th, 17th, and 19th, no exacerbation.

—*Annuaire de Medecine*, 1854.

Hysterical Hydrophobia. Case reported by Professor BURGGRAEVE, of Gand. Translated for the MONTHLY, by P. F. C. DESLANDES, Bachelier ès lettres.

A man about fifty years old, of a nervous temperament, was brought to the civil hospital of Gand, laboring under characterized fits of hydrophobia. He never had been bitten, and knew not what to attribute his disease to. The fits returned at intervals, nearer and nearer, and in a truly frightful manner. The patient began to experience at the epigastrium a constriction, which soon extended to the pharynx, and rendered deglutition not only difficult, but painful. Hence the very idea of drinking distressed him exceedingly. When they offered him the vessel to quench the thirst that burnt him, he

clung to it with rage, and by dint of violent efforts hardly succeeded in swallowing a few drops of water. The eyes were sparkling and shunned the light; every shining body increased his agitation. The tongue presented on both sides of the frenum the two small spots observed in ordinary cases of hydrophobia. The patient fell at last into a state of cerebral congestion, which ended in death.

The autopsy did not reveal anything particular about the brain or the meninges, except the injection. The back of the mouth and the pharynx were red, and the latter strangely contracted. At the lower end of the œsophagus existed a ball of lumbricoid worms, some of which had ascended the tube. M. Burggraeve thinks these worms have caused the symptoms under which the patient died. If we analyze these symptoms, says he, we find an hysterical condition carried to its extreme violence. The irritation of the œsophagian nerves extended to the pharynx, and produced there the hysterical ball or constriction. He thinks that if the cause could have been suspected, a vermifuge or a simple emetic might perhaps have saved the patient.

As hydrophobia may to a certain extent be considered as an hysteria, Prof. Burggraeve asks himself whether in animals most commonly subject to this disease, as dogs, the cause was not the same, and did not depend on an hysteria, due to the non-satisfaction of the generative wants (*besoin génital*). He bases this hypothesis on this fact of observation, that rabies is rare amongst dogs in the wild state, if not unknown. It is in the domestic state that they contract this disposition, perhaps on account of the disproportionate number of males and females, the latter being less generally kept, on account of the inconveniences they occasion.

However it be, the above case is very interesting as an example of the spontaneous hydrophobia of writers, or rather of symptomatic hydrophobia, connected in all appearances with an hysterical nervous condition.—*Gazette des Hopitaux*.

Insanity in California. The effect of Gold Digging on the Brain.

The resident Physician* of the Asylum for the Insane of the State of California, in accordance with the requirements of the law, respectfully submits his Annual report to the Board of Trustees, for the information of the Senate, the Assembly, and the people.

* It is regretted that the physician's name is not known to us.

The following statistical tables, with the accompanying explanatory remarks, will afford an accurate exhibit of the condition of the institution ; the number of patients admitted ; the number under treatment during the year ; their social and civil relations ; the number who recovered and were discharged ; their nativity ; sex, age, and the mortality :—

	<i>Total.</i>	<i>Males.</i>	<i>Females.</i>
Number in the Asylum Dec. 31, 1853,	103	93	10
Number admitted to Dec. 31, 1854,	202	179	23
Whole number under treatment during the year 1854,	305	272	33
Number who recovered and were discharged,	150	132	18
Number who died,	21	20	1
Number in the Asylum Dec. 31, 1854,	134	120	14

The institution has thus received, provided for, and had under medical treatment, above three hundred human beings deprived of their reason, incapable of taking care of themselves, many of them dangerous to the peace and good order of society, and a terror to the community.

These have been sent to us in every variety of form and condition, from raving madness and acute delirium to dementia and melancholy, with a slight wandering of the understanding. Some from comfortable and luxurious homes, others from jails and prison ships, habitations unfit for beasts, and, in many instances, ragged, filthy and covered with vermin ; some in the early and curative stages of the disease ; others, old and chronic, past the hope of recovery ; some partially conscious of their condition and desirous of admittance ; others fearful and in dread of confinement and a dungeon ; some in early youth and boyhood ; others in the sear and yellow leaf, even in extreme old age. A large majority, however, were in the prime, the vigor and the meridian of life, when all the feelings and emotions possess the highest energy and the greatest activity. To classify correctly—to establish and maintain some degree of order and harmony among such varying, discordant and dangerous elements,—among such a mass of shattered intellects, required constant watchfulness and anxiety, and demanded unwearied care and attention. And it is with devout gratitude and thankfulness to Him who healeth the sick, the Supreme Ruler of the Universe, that we acknowledge our dependence, in the recovery and restoration of more than one-half of these miserable and unhappy beings.

As the laws of health and disease are constant and invariable, it is necessary, before we draw any general conclusions, to examine a great number of facts, collected at different times and under various

circumstances ; then our deductions are reliable—they are physical truths—fixed facts. Hence the necessity for alarm and anxiety at the rapid increase and progression of mental diseases in this State, at the ratio of one hundred per year, according to the statistics of the last three years. The following table shows the number admitted during every month in each year :—

	1852.	1853.	1854.	Total.
January - - - - -	1	4	8	13
February - - - - -	2	13	15	30
March - - - - -	4	4	15	23
April - - - - -	2	17	17	36
May - - - - -	21	23	16	59
June - - - - -	10	15	15	40
July - - - - -	7	17	23	47
August - - - - -	7	15	20	42
September - - - - -	18	11	19	48
October - - - - -	7	14	14	35
November - - - - -	22	13	24	59
December - - - - -	23	15	16	54
Total, - - - - -	124	160	202	486

The temperature of our climate is so equable, the atmospheric changes so regular and gradual, that they exert but little influence in the production and development of this disease.

During the six hottest months of the dry season, 272 patients were admitted, and 214 during the other months.

The following shows the supposed productive causes of insanity, in three hundred and five cases under treatment during the year :—

MORAL CAUSES—132.

PHYSICAL CAUSES—173.

Mental excitement, - - -	27	Intemperance in spirits, - - -	42
Domestic affliction, - - -	21	Intemperance in opium, - - -	2
Pecuniary disappointment, - - -	28	Intemperance in tobacco, - - -	1
Political disappointment, - - -	2	Masturbation, - - - - -	28
Disappointed affection, - - -	5	Amativeness, - - - - -	3
Desertion of wife, - - - - -	3	Consequence of parturition, - - -	10
Desertion of husband, - - - - -	3	Suppressed menstruation, - - -	2
Desertion of mistress, - - -	2	Congestive fever, - - - - -	2
Seduction and desertion, - - -	2	Typhoid fever, - - - - -	6
Jealousy, &c., - - - - -	2	Injury of head, - - - - -	6
Grief and fear, - - - - -	5	Epilepsy, - - - - -	10
Sudden wealth, - - - - -	2	Syphilis, - - - - -	4
Religion, &c., - - - - -	3	Coup de soleil, - - - - -	2
Fanaticism, - - - - -	3	Ill health, - - - - -	23
Spiritualism, - - - - -	4	Hereditary, - - - - -	10
Mormonism, - - - - -	1	Unknown, - - - - -	12

The attention of the public, of medical men and legislators, should be constantly directed to the fearful and alarming increase of insanity in this State. The productive causes of this disease should be sought

for and investigated with minute care and attention ; the method of prevention and cure should be pointed out, and, especially, of its curability in the early stages of the disease.

In the whole scope of medical science, more crude, ignorant and mistaken notions are entertained in regard to mental derangement than to any other malady. Esquirol believed that it was one of the attributes which accompany civilization, and steadily increased with every advancing step in luxury, refinement and intellectual progress. In the struggle which is now continually maintained and absolutely necessary to acquire wealth, power or distinction, it requires an immense amount of mental energy, incessant application, and the utmost tension of all the faculties. The brain is in perpetual excitement in every department of business—in every branch of trade and commerce—in science—in the mechanic arts and in agriculture.

Never, since the world was made, has there ever been exhibited such an amount of mental energy, activity and determination. There is no cessation—no rest—no relaxation. The call for mental labor is unceasing and unremitting. There is no reflection—no thought that the regulation of the functions of the brain are as necessary to health as suitable and digestible food for the stomach, or pure and respirable air for the lungs.

That insanity is a corporal disease ; that the brain is the instrument of the mind and organic part of the system ; that it is generated and nourished, becomes diseased and is cured, as any other organ of the body.

The neglect of physical education is another prolific cause of incipient insanity. Parents, teachers and the learned, dilate and dwell upon the importance of cultivating the intellectual faculties, while the natural laws, which govern the physical organization, are wholly neglected. The youthful mind is stimulated to the highest point, while principles of self control, of morality and religion, are unregarded, or deemed of only secondary importance.

This premature and overstrained exercise of the mind, particularly in precocious children, induces disease of the brain and predisposes to insanity.

The physical constitution, the organic structure, the different temperaments and dispositions, are transmissible and propagated from parents to children, and thus the disease becomes connate and hereditary.

In a previous report, it was remarked, that California possessed the ability and capacity for producing, rearing and educating the

most healthy, vigorous and energetic race of men on the earth. The climate is mild and equable, the atmosphere dry and exhilarating, the sun clear and cloudless, and the sky bright and beautiful, for nearly ten months of the year. These impart an elasticity, cheerfulness and hilarity to the mind, and vigor and activity to the body, entirely unknown and inappreciable by the inhabitants of colder and moister countries.

It is incumbent, therefore, upon those who have the guardianship and education of the youth of the land under their control, to see that their physical organizations are cultivated, expanded and trained, as well as their moral sentiments and intellectual faculties. Give them games of strength and feats of agility, active exercise in the open air and pure sunshine ; not constantly confine them to crowded, heated and badly ventilated apartments, moping and worrying over studies they cannot and care not to understand. Develop their physical structures, their muscular systems ; retard their precocious propensities ; then cultivate and expand their cerebral organization and prepare it to manifest the powers of the mind, remembering that the healthy function of every organ is weakened by inactivity, strengthened by exercise, but exhausted by continual application.

Intemperance in the use of liquors, of tobacco, of opium, and in our daily food, exerts an important and dangerous influence on the digestive organs, on the vascular system and the brain, and is a productive cause of many terrible diseases. It increases the determination of blood to the brain, excites some of the organic functions and suppresses others, produces morbid changes in the structure of the brain, and, immediately or remotely, mania and dementia. Our manner of living is not at all conformable to sound dietetic principles. We all live too fast ; consume too many stimulants, eat too heartily, dine too late, and drink too much wine. Our climate requires, and health demands, a less quantity of food, and drinks of a different and milder nature.

Amativeness, the desire for sexual pleasures, although implanted in the human race for the propagation and preservation of the species, is sometimes a productive cause, but frequently a consequence of insanity. In many sensitively organized and vigorous persons, the indulgence of this passion constantly occupies the mind, excites other passions, causes sleepless nights, extravagant reveries, and leads to debasing and demoralizing habits, which enervate the body and destroy the mind. The abuse of this propensity is the source of innumerable evils, and the only remedy is the suggestion and recommen-

dation of Spurzheim : "that of instructing young persons in the terrible and fatal consequences of the improper gratification of this passion, as preferable and better than keeping and permitting them to grow up in a state of ignorance, compromising, and, in the end, destroying their own bodily and mental constitutions, and that of their descendants."

Pecuniary disappointments, reverses of fortune, domestic trouble, sorrow and anguish, melancholy, fear and intense anxiety, disturb the healthy operations of the brain, and, by continued action, produce disease. Individuals thus afflicted should arouse themselves and strive against every feeling of despair and despondency ; should seek active employment, industrious toil, manual labor, and ardently engage in the duties of life. Thus a healthy, vigorous physical system will be secured, which is the best prevention and safeguard against the development of nervous and mental disorders. Then with sensible, moderate and rational habits of life, and fortified with pure and correct principles of morality and religion, if trouble and misfortune come, the mind and feelings will not be enfeebled or crushed, but purified and strengthened.

Parturition, child-bearing, is another frequent cause of insanity, and the number of females who have become deranged, after confinement, and during or immediately subsequent to the period of lactation, has nearly doubled within the last year. The reasons are : the peculiar fruitfulness of the sex in this climate—the intense pain of delivery—errors in regimen—indiscretions in exercise and labor—fatigue—anxiety—and the neglect of the moral affections. The lochia are suppressed or diminished—the milk is not secreted—a lacteal metastasis occurs, and mania or melancholy as certainly follows.

These cases appeal, with peculiar sympathy, for the utmost care and attention. They are the weaker sex, and not only liable to all the connate, accidental and hereditary causes of insanity, but they suffer from numerous other complaints, to which the male sex are not exposed.

In consequence of the large accession of females to the population of the State within the past two years, and the increased number who have become insane, and sent to this asylum for care and treatment, it is highly expedient, indeed absolutely necessary, that an additional wing should be immediately erected for their special accommodation, so as to separate them wholly and entirely from the males, and render them secure from observation and intrusion. Then the institution will, in all probability, possess ample space for the accom-

modation of all the insane of both sexes that will have accumulated during the next ten or twenty years.

The annexed table will exhibit the civil condition of those admitted, and the influence of marriage and celibacy on the development of insanity :—

	<i>Males.</i>	<i>Females.</i>	<i>Total</i>
Single, - - - - -	213	4	217
Married, - - - - -	38	18	56
Widowed, - - - - -	21	11	32
Totals,	272	33	305

The most tangible facts connected with the relation of marriage and celibacy to insanity, are displayed by comparing the number of married and unmarried persons in great public hospitals. It is a fact deducible from such statistics, that celibacy tends to augment the number of lunatics, from the restraints which it imposes and the vices to which unmarried persons are more or less exposed. The lives, habits and pursuits of the married are more regular, their social condition and employment more fixed, and they are less subject to excitement and violent emotions. The above table presents some remarkable, interesting and curious results, such as are exhibited by no similar institution in the world.

The following shows the different ages of 305 patients at the time of their admission into the asylum :—

	<i>Males.</i>	<i>Females.</i>	<i>Total.</i>
Between 10 and 20 years, - - - - -	21	2	23
“ 20 and 30 “ - - - - -	142	12	154
“ 30 and 40 “ - - - - -	68	10	78
“ 40 and 50 “ - - - - -	26	6	32
“ 50 and 60 “ - - - - -	9	2	11
“ 60 and 70 “ - - - - -	4	1	5
“ 70 and 80 “ - - - - -	2	0	2

The average age was only 32. The extremes 10 and 70 years. Children rarely become insane. They are not capable of maintaining any long or extensive combination of thought. They have few cares and little anxiety, and are not initiated into the troubles and trials of life. Neither are old persons often afflicted with this disease, except with a variety known as senile dementia.

They have passed through all the dangers and frivolities of youth, the illusions of a preceding age, and, feeling their physical infirmities increasing, live calmly, tranquilly, and free from excitement.

It is middle age, the prime and vigor of life, between 20 and 30

years, when the mind possesses the highest activity and energy, that insanity most frequently occurs.

Those counties containing large cities, as San Francisco, Sacramento, and San Joaquin, have sent more than one-half the whole number, while the populous mining counties of El Dorado, Calaveras, Uuba and Tuolumne, have been largely represented.

Americans, - - -	183	Germany, - - -	18	Chili, - - - -	1
England, - - -	16	Switzerland, - -	1	Peru, - - - -	1
Ireland, - - -	24	Denmark, - - -	1	Mexico, - - -	10
Scotland, - - -	7	Norway, - - -	1	Canada, - - -	2
France, - - -	22	Sweden, - - -	1	Australia, - -	2
Spain, - - -	2	Russia, - - -	2	China, - - -	1
Portugal, - - -	2	Prussia, - - -	2	Hindustan, - -	1
Italy, - - -	5	Poland, - - -	2		

This table shows the character of our population, a perfect conglomeration of different peoples and nations, without fusion or assimilation. Americans from every State in the Union, foreigners from nearly every government in Europe, from South America, from Asia, and from the islands of the Pacific.

We have also admitted nine Africans—six males and three females—four of whom have been discharged. One died, and four yet remain in the Asylum.

Our table of mortality is somewhat greater than last year, owing to a variety of causes, but principally from the admission of persons not proper subjects for an asylum for the insane, such as mania from typhoid fever, *mania a potu*, and epileptics. Thus, three deaths occurred from the first, two from the second, and four from the last disease; while, out of one hundred and three cases of acute mania, the most violent form of insanity, only two cases proved fatal.

The general health of the establishment has been good. No epidemic—no acute disease of any kind, unconnected with the brain, has prevailed to any extent.

No suicide has occurred within the past year, nor, indeed, at any time since the organization of the institution. These cases of self-destruction have become so numerous lately—having swept over the State almost like an epidemic—that the Asylum is considered exceedingly fortunate that nothing of the kind has happened within its walls.

Several homocidal cases have also been under treatment, yet no accident of a serious or dangerous character has taken place.

PART VI.—EDITORIAL AND MISCELLANEOUS.*Report of the Medical Board of the New York State Emigrants' Hospital, for the Year 1854.*

From this Report the following is condensed :

During the year 15,861 patients were treated in the wards of the Hospital. In the Refuge Department 13,806 cases of disease received medical treatment. The whole number of cases treated in the Institution amounted to 29,667. The percentage of mortality on the whole number of cases was $5\frac{1}{2}$.

In the Lying-in Department 894 women were admitted, including some just after confinement, 701 children were born, 35 women died, and there were 19 cases of puerperal fever, under this term being enumerated metritis, peritonitis, phlebitis uteri, &c. There were 13 cases of Instrumental delivery, 11 by forceps, and 2 by craniotomy.

In the Surgical Department, the variety of diseases has been great and interesting ; among the many capital and successful operations may be mentioned the excision of the arm at the shoulder joint, for a tumor produced by cancerous degeneration of the bone, in size the largest on record ; and the exsection in two patients of the entire radius in one case, and of the entire ulna in another, for extensive disease of these bones, the hands having been thus saved, and their usefulness preserved. During the last three years anæsthetics have been administered when indispensable, in upward of 1000 cases, and in no instance has an accident occurred, or the least bad effect followed their exhibition.

In the Surgical Department the whole number of cases treated during the year was 4,574, the number of cases cured and discharged 4,079, and the number of deaths 89, or less than 2 per cent. on the number of cases treated.

It is deserving of remark that the mortality among the surgical patients of the Hospital is lower than that of the population of the city, including both sick and well.

The cases of death were, for the most part, incurables, or children admitted to the Hospital in a state of marasmus, existing as a complication of some surgical malady.

HENRY G. COX, M.D., President Medical Board, and Physician-in-Chief ; JOHN MURRAY CARNOCHAN, M.D., Surgeon-in-Chief ; ERNEST SCHILLING, M.D. ; SIMON HABEL, M.D. ; GEORGE FORD, M.D. ; T. ADDIS EMMET, M.D., Secretary to Medical Board.

BLACKWELL'S ISLAND HOSPITAL.—In our last number we alluded to the Annual Report of Dr. Sanger, the Resident Physician, and made some remarks in reference to the importance of changing the name of the Penitentiary Hospital. This is not the only reform which is needed in these Institutions. There are now under the charge of the Resident Physician, a male and female Hospital at the Alms House, a male and female Hospital at the Work House and the Penitentiary Hospital.

The Board of Ten Governors, at their meeting April 17, 1855, passed the following Resolution :—

Resolved, That the Resident Physician be requested to give to this Board, in writing, his opinion as to whether the departments are properly served, as regards the sick inmates, or whether they could be better attended to in one building, to be designated the Hospital of Blackwell's Island ; also as to the economy of the present mode, or to a consolidation of the sick ; and whether a Hospital can be organized so as to classify the various departments, and if under such organization, for certain complaints pay Boarders can be taken.

These interrogatories by the Board, have been answered by Dr. Sanger, in a Report, which has since been published. We have space but for a few extracts from his reply :—

It is, therefore, my decided opinion that the sick inmates of these Institutions, excepting the court prisoners, the insane, and those suffering from small pox, should be treated in one general Hospital, of sufficient size to admit of the most perfect classification of patients, as well as of diseases. I believe that your Alms House and Work House, as now organized, are not proper places for the treatment of the sick. I believe that the sick and well should be separate, and that the former should not be treated with, or in close proximity to, the latter. I hold this to be good medical, as well as sound common sense. All persons sick enough to be confined to bed, or from the nature of their complaints unable to work, and at the same time fit subjects for medical treatment, should be separated from those competent to labor, transferred from the Institutions intended for the well, and sent to the general Hospital : there to remain until cured, or enabled to resume their duties at the several Institutions whence they came. Small Hospital wards should be retained at each of those places, for the treatment of any taken suddenly ill, and the temporary treatment of accidents, and those sick for only a day or two.

Dr. Sanger also shows, most conclusively, that the consolidation of the sick into one general Hospital, would be altogether more econom-

ical than the present arrangement. In relation to the last point of the enquiry contained in the Resolution, Dr. Sanger says:—

There would be no difficulty in so organizing a Hospital as to meet the requirements of the various Institutions, but to accomplish this satisfactorily, it should be entirely distinct and independent of all; situated in that respect, as are Bellevue Hospital and the Lunatic Asylum. The most fruitful source of difficulty between the officers of the various Institutions, to my certain knowledge, during the past ten years, has been the clashing of *medical* and *non-medical* rule. The regulations governing the sick and well, are constantly interfering with each other.

Cut loose your medical departments from the surveillance and interference of non-medical men, and let them swing out on the broad sea of self-reliance and responsibility, give them a chance to be governed by the only law that should rule them, and you will be surprised at the giant strides they will make on their march to respectability and usefulness. Prevent ignorant interference with your Physicians and Surgeons; direct that your sick be governed by the laws that should govern the sick, and the well by the laws which should govern those in health. * * * * *

These small Hospitals, as now situated and conducted, are no credit to you,—of no use or interest to the medical profession at large,—and (if not now) soon will be nuisances to the Institutions in which they are located. In my opinion three years will not pass by, ere you will be compelled by the force of numbers, to turn these Hospitals out of doors in order to make room for the well, or those able to work.

Your Honorable Board receives, during each year, the gratuitous and willing services of a large number of the first Physicians and Surgeons in the city. Is it too much to ask of you, in return for their services, oftentimes rendered when you are enjoying yourselves in your comfortable beds, that you will, by grouping these patients, aid them in their duties, and increase their field of observation and experience?

We sincerely hope these bold efforts of Dr. Sanger, to effect such important reformatations in these Institutions, will be successful.

BLANCARD'S PILLS OF THE IODIDE OF IRON.—To these Pills we have before alluded. Since that time we have had occasion to make repeated trials of them, and have been quite satisfied with them. It is not necessary for us to speak of the many indications filled by this preparation of iron. Almost every practitioner has constant occasion for it, and in our most common pharmaceutical preparation, the syrup, it is daily used in great quantities, though the dose is so small. Many attempts have been made to administer it in pills, but from its

deliquescent propensities this has not hitherto been accomplished. Blancard appears to have found a way to accomplish this by enveloping the iodide in "porphorized iron" and balsam of tolu. What the process is, we do not know, but the indorsement of the pills by the French Academy of Medicine, is sufficient guarantee that the preparation is a good and legitimate one. Neither should they come under the suspicion of being an empirical preparation, as one at first fears all "pills ready made" are. Some of these pills were sent to us by the agents for this city, MM. Fougere, for trial, and they were, as we have said, quite satisfactory to us. A portion distributed to our friends, gave equal satisfaction to them, and have caused an increased demand for the article. This we say, that our readers may avail themselves of the preparation, if they have occasion for it.

EXPLANATORY.—We very willingly insert the following letter from Dr. Beadle, which fully explains itself:—

42 Bleecker street, NEW YORK, May 12th, 1855.

Prof. E. H. PARKER, Editor *American Medical Monthly*:

DEAR SIR,—Permit me to correct a statement made in an article which appeared in the April number of your journal, entitled "A nut for the Academy."

Undoubtedly it is in consequence of a false impression having been made on your mind as to the action taken on the nomination of Dr. Tuthill, to Resident Fellowship of the New York Academy of Medicine, that injustice has been done to the Committee on Admissions of said body. This Committee, for the several years that I have had the honor of belonging to it, has acted on all nominations with as much promptness as circumstances would allow; and in the instance now referred to, no considerable delay occurred in acting on the nomination, after the receipt of Dr. Tuthill's testimonials, and he was not recommended to the Academy by the Committee, simply because Art. III. of the Constitution says that "Resident Fellows shall be regular practitioners of Medicine and Surgery, in the city of New York," and Dr. Tuthill informed the chairman of the Committee, when told of this provision of the Constitution, that he was not at all engaged in the practice of his profession, but was employed in editorial duties in connection with the "New York Daily Times."

With this statement of the facts in the case, will you see that the matter is put right, and thereby oblige, very

Respectfully yours,

E. L. BEADLE,

Chairman of Committee on Admissions.

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